

MANUFACTURERS' RECORD

A Southern Industrial, Railroad and Financial Newspaper.

VOL. XVI. No. 7. }
WEEKLY.

BALTIMORE, SEPTEMBER 21, 1889.

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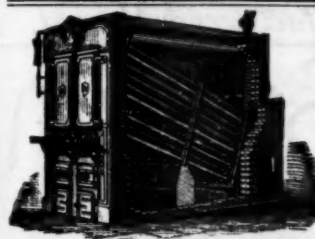
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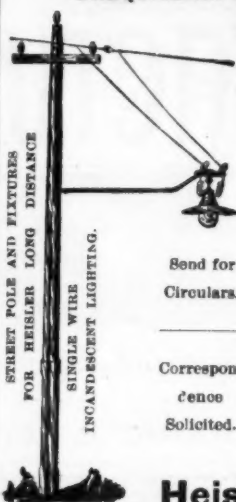
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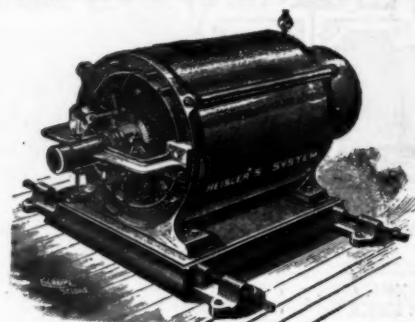
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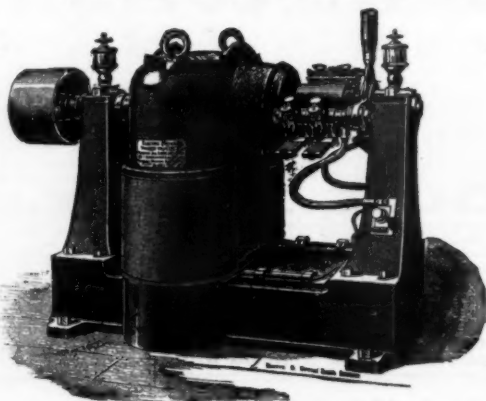
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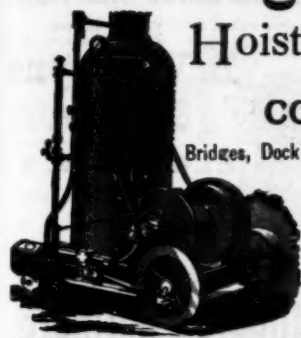
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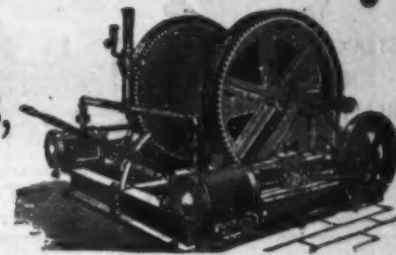
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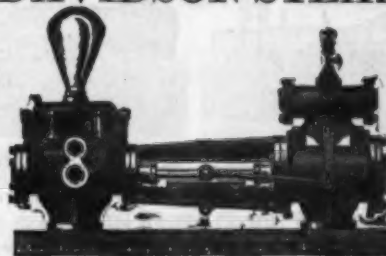
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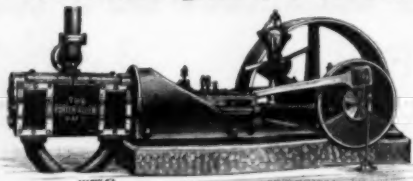
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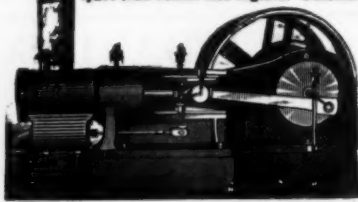
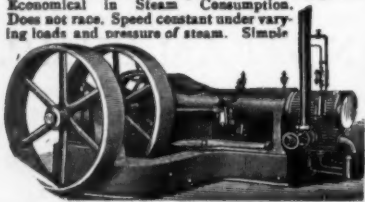
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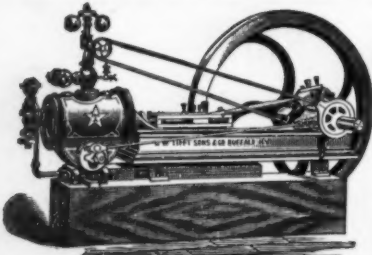
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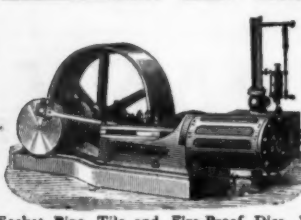
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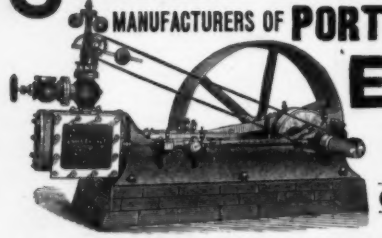
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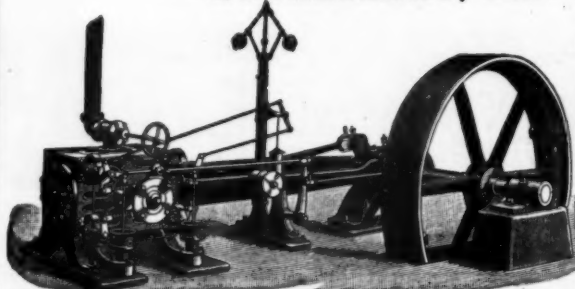
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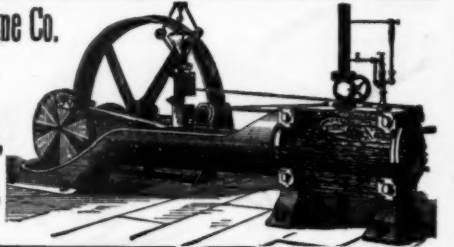
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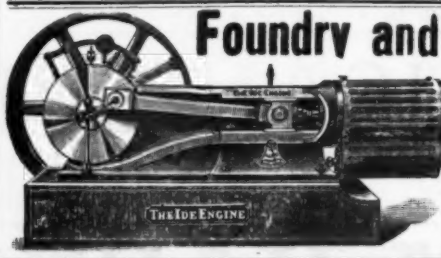
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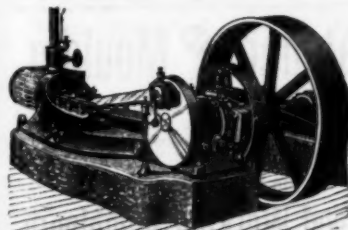
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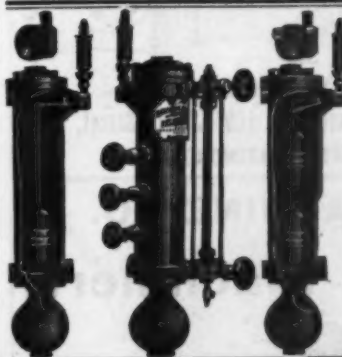
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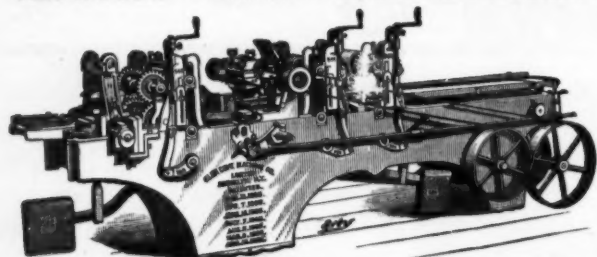
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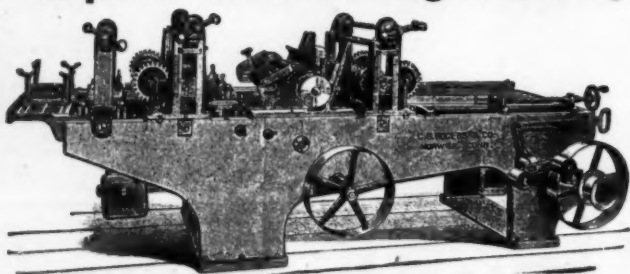
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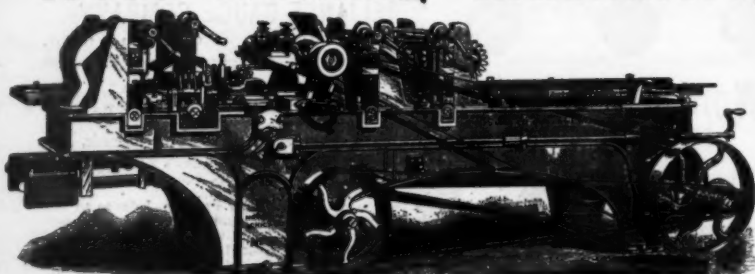
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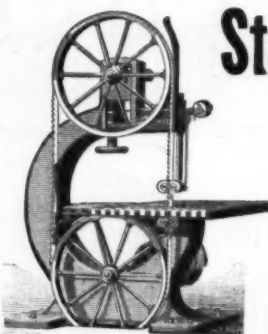


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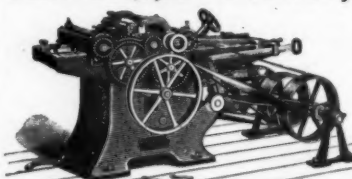
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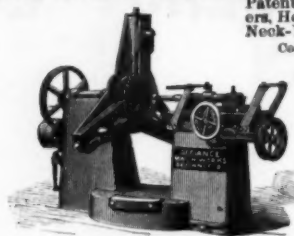
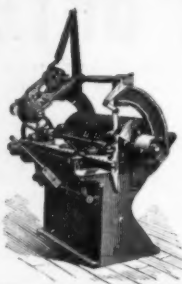
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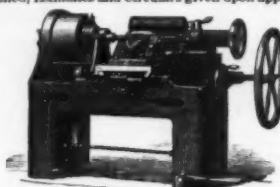
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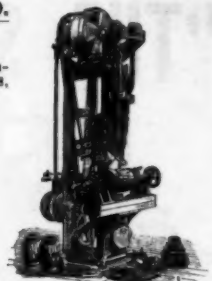
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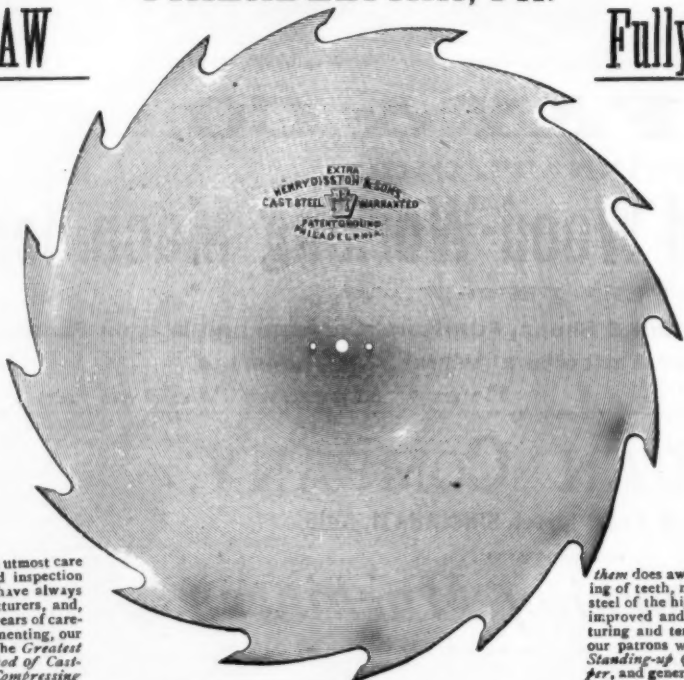
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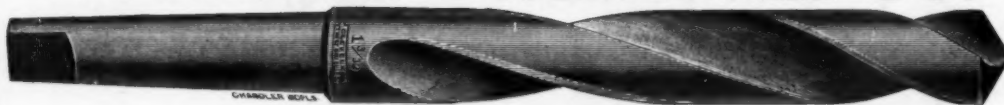
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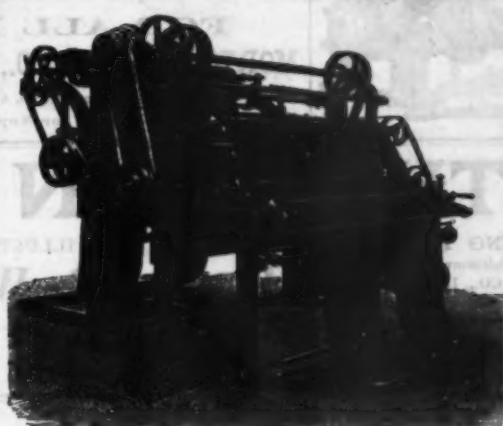
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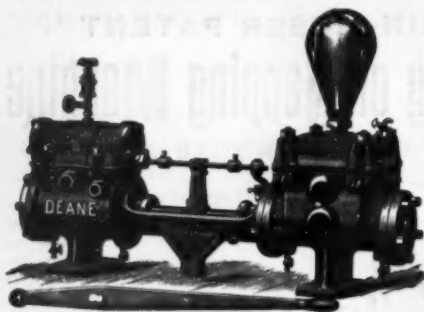
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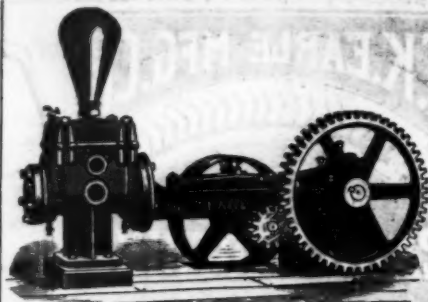
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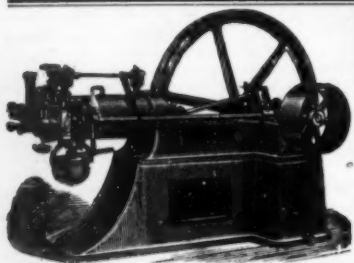
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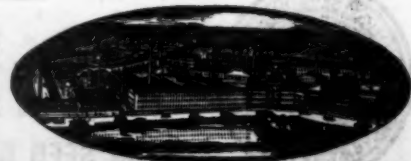
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Manufacturers' Record.

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WM. H. EDMONDS, BUSINESS MANAGER.

OFFICE,
COR. EXCHANGE PLACE AND COMMERCE STREET,
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NEW YORK OFFICE, - - - 132 NASSAU STREET.

THOMAS P. GRASVY, Southern Staff Correspondent.
Headquarters at FLORENCE, ALA.

Subscription \$4.00 a Year.

BALTIMORE, SEPTEMBER 21, 1889.

THREE weeks ago the MANUFACTURERS' RECORD presented some remarkable statistics as to the magnitude of the trade of South America, furnished by Mr. T. J. Hurley, of Boston, who has spent much time in that country. These figures have attracted very wide attention, and opened the eyes of many to the splendid market that awaits the manufactured goods of this country. Following in the same line, Mr. A. R. Campbell, of Wilmington, N. C., who has lately returned from Buenos Ayres, gives the readers of the MANUFACTURERS' RECORD to-day some facts regarding the extent of the commerce of that port and its bearing upon our foreign trade. We must make a vigorous move to gain a fair share of the enormous trade of our South American neighbors. It is essential to the prosperity of our whole country to do so, and the South would reap the largest benefits. Southern cotton mills and iron works must begin to lay the foundation for foreign trade, and we must look to South America for it. The magnitude of the commerce of the one port of Buenos Ayres may be appreciated from the fact that in 1887 18,701 sail vessels, with a tonnage of 749,921, and 6,124 steamers, with a tonnage of 1,485,091, a total of 2,235,012 tons, arrived there, while the aggregate of vessels that sailed from that port that year was 2,459,693 tons.

IN an interview published in the Dallas Texas News, Col. James B. Simpson, a leading business man of that city, said:

The development of productive industry in the South is so rapid and so resistless that it is making alarming inroads upon the factory industries of New England. From there men of intelligence and wealth are pouring millions of money into the South to recover from the losses they must eventually sustain in the East. Anybody who reads the MANUFACTURERS' RECORD, Baltimore, will perceive the truth of this statement.

THE MANUFACTURERS' RECORD makes a report of Southern progress in the year ending September 1 that will astonish those among our Northern brethren who think we put in our time at "nigger hunting." It reads like a fairy tale, and might well stagger belief were its truth not attested by all who have made a study of the industrial advancement of this section. Besides, the MANUFACTURERS' RECORD is not open to the charge of sensationalism. It is a business publication, and deals with facts and figures.—Memphis Avalanche.

Cotton Manufacturing in the Future, North and South.

Twenty-five years ago there were a number of large iron-working establishments in Massachusetts and other parts of New England that had phenomenally remarkable records for paying dividends. Some of these establishments dated their inception back a half century or more. Their products were known everywhere, and their stock was considered safer than government bonds. Prosperous towns, dependent entirely upon these industries sprang up, and neat home-like cottages made the employees to be envied among laboring men.

Two great events have happened in this quarter of a century. The great empire of the West has magically sprung into existence, and now another and still greater empire is springing up in the South. In these two great empires iron-working is to become the leading industrial pursuit, and as a result these famous establishments of New England have faded away, one after another, until nearly every one has dropped out of existence. The only evidence of the existence of several of these once famous establishments are groups of weather-worn, decaying buildings, long since abandoned. Others are working hard to keep alive a once famous name by doing a merely local business. Not one of them is much more than holding its own. In fact, outside of the manufacturing of numerous valuable patented mechanisms, the only iron-working done in New England now is that in which great skill and fine mechanical ingenuity is required.

One of these famous old iron-working establishments was situated in Fall River. Its management foresaw the inevitable, and, rather than eat up its large accumulated surplus in maintaining a losing fight, made its factory over into a cotton mill. But events during the last decade have demonstrated the fact that the South can manufacture cotton as well as iron in competition with New England. Is it not safe to predict from analogy, then, that the cotton industry of New England will in the not far distant future meet the same embarrassment that iron working has met? Every tendency of the day points to this end. Only a few years ago many mills in the North were making coarse goods, but the competition of the South has already driven these mills into making better goods or out of existence. Many new mills have been built in the North within the past few years, but probably every individual one of them has been fitted to make the finer grades of goods. Some of the Southern mills are going into finer goods, and enough of them have already done so to demonstrate the fact that they can do as good work as the Northern mills, and sell their goods in the open markets at profitable prices.

The attempt to lay the cause of

the decay of iron working in New England to the tariff is nonsense. Under any conditions New England must import both fuel and raw material, and the future of its cotton working will be like the present of its iron working, only in those departments where great skill and mechanical ingenuity are requisite.

It is not at all improbable that this Fall River concern may yet be compelled before the end of another quarter century to again change its plant in order to prevent the competition of the South closing its doors.

Grape Culture in Florida.

It would seem as if grapes, as a staple product in Florida, ought to occupy a position only second to oranges, and, judging by our exchanges and numerous correspondents, the people of the State are working with this end in view.

The attempt to raise grapes in Florida has been something of a struggle, owing rather to a lack of knowledge of the subject than to the influence of the soil and climate. But good has come out of this struggle, and the growers have learned that native-grown vines are better than Northern ones, which are not acclimated, and that there is a great risk in attempting to raise European varieties. There is one thing, however, that the growers have not learned, which we fear will be a bitter disappointment and costly experience to them, and that is to study the wants of the market and to raise those varieties of grapes that pay the best. The great market for all the Florida crops is in the North, and if the Floridian fruit-grower wants to get the most for his products he must consult the tastes of the North, and act in accordance to the dictates of that taste. It makes no difference whether this taste is based upon some whim or caprice or upon reasonable grounds. The successful man will humor this taste and make his products suit it, rather than attempt to make the taste come over to the peculiarities of his product.

We learn from a variety of sources that white grapes, especially of the Niagara variety, are almost solely planted in Florida. This is a great mistake, for two reasons. It is staking everything on one variety and condemning all others, and swamping the market with one kind of fruit, and it is working in opposition to the Northern taste. White grapes are not popular in the North. Why, then, do not the Florida growers raise colored grapes instead of white grapes, and humor this taste? If Florida were the sole dependence of the North for grapes, these growers might, perhaps, attempt to force the market to take white grapes or none. But such is not the case, and this liking for colored grapes is so deep-rooted that a thriving business is carried on in shipping grapes from California to New York.

A correspondent from Orlando says: "There have been hundreds of acres put out in grapes here in the last two years, and probably the acreage will be doubled the year to come, so you can see what a crop of Niagara grapes there will be in two or three years more." What is true of Orlando is true of a great many places. It will thus be seen that in a few years Florida will be unloading upon the market a variety of grapes that does not suit the popular taste, and that is not good for wine-making, according to the best information we can get. Have we not grounds then for our fears that the grape growers of Florida have bitter disappointment and a costly experience in store for them?

We believe grapes can be made one of the leading crops of Florida, but the energy put into the industry must be accompanied by discretion in the choice and number of varieties.

THE MANUFACTURERS' RECORD believes Florida is one of the coming fruit-growing regions of the world, and looks forward to the time when grapes, among the other fruits, will be sent North by the car-load, but in such variety and shape as to suit the popular taste and demand.

Some More Vegetable Fibres.

In a recent letter to the MANUFACTURERS' RECORD regarding vegetable fibres, Hon. Edwin Willits, assistant secretary of agriculture, wrote: "The 'ixtle' or 'istle' is a well-known fibre which grows in British Honduras. It belongs to the pineapple family, and is also known as wild pineapple and silk grass. The leaves are steeped in water by the natives, and, after beating with a wooden mallet, yield a strong fibre, in common use for cordage on the island of San Domingo. It is considered by some authorities a superior substitute for flax, and is used for cotton baling or bagging, wagon sheets, carpets, nets, hammocks, etc. A leading authority regards this fibre as probably more valuable than that of any other tropical plant.

Yucatan also produces the fibre known as sisal hemp, which, from its peculiarity of resisting the action of dampness for a greater length of time than hemp or similar fibres, makes it very desirable in the manufacture of tow lines, ropes and the rigging of ships. It is said that very considerable tracts of land in our gulf States would be found suited for the production of this fibre."

Here then are two valuable plants for the South to investigate, to see whether they can be made to produce paying crops.

ONE of the greatest papers to-day in the United States is the Baltimore MANUFACTURERS' RECORD. It is doing more for the South and for Southern development than any publication known to the Post. Its influence is well nigh limitless, and its work of such high and intelligent character as to be readily felt throughout the entire country.—Houston (Texas) Daily Post.

Reviving our Merchant Marine.

Congress will have two very important questions before it this winter, which require deep and careful consideration. These are the reviving of our shipping interests and the proper adjustment of the tariff. This latter question has already been too much discussed, but the shipping question, which is only second to the tariff of the important questions of the day, has not been as intelligently discussed by the press and the public as it should be. There are many things in it to be considered besides the mere repeal of an antiquated and burdensome law. A proper subsidy must be provided, or else American ship-owners cannot compete with the subsidized ships of various nations of Europe. Where all things are equal, the American ship must be given special advantages over foreign ships in our own carrying trade. Special inducements must be made for the building of swift, capacious steamships, which shall be auxiliary to our rejuvenated navy in case of war. Ship-building must be encouraged and fostered in every way; and last, but perhaps most important of all, laws must be passed to throw every safeguard and protection around the sailors.

The great weakness in the commerce of every nation to-day is in the quality and care of sailors. No class of men are more to be pitied and protected than sailors. They are abused, ill-treated and robbed on shore, and not infrequently at sea, too. Much of England's supremacy on the sea to-day is due to this abuse and robbing of sailors. It is not generally known that a common custom on English vessels is to ship a crew for a certain voyage, and just before port is reached to so ill-treat and abuse them that they will embrace the first opportunity to run away and forfeit their wages. This money is turned in to the ship, another crew secured and the same dastardly trick served on them. The writer has known of several instances where English shipmasters have thus deliberately robbed their crews. A master who does such a deed should be prohibited by law from ever bringing another ship into any port in this country. The blame is not always all on one side, it is true, but the whole genus sailor has so suffered abuse that he is hardly responsible. On shore he is robbed by boarding-house keepers and "sharks," and at sea by the "shop chest," which is usually the greatest cheat and fraud of them all. In short, a sailor is like a ship in many waters, the helpless prey of barnacles.

If the United States government would formulate some humane scheme for the protection of sailors when on shore, it would lay the foundation stone upon which our coming revival of shipping must be built, and we would respectfully suggest that the first step be to see that sailors in our navy receive treatment

more suited to human beings. If the government cannot maintain sailor boarding-houses, it can at least supervise them and prohibit "shanghaiing." No sailor should be allowed to go to sea when under the influence of liquor, and if he must be paid advance money a government agent should see that this money is used for the sailor's benefit, and thus partially at least be relieved from the impositions of the "shop chest."

By carrying out such a system as here outlined, not only will the quality of the shipping be of the latest improved pattern, but the personnel of the crews will be superior to those of all other nations. Better and quicker voyages will thus be made, petty exasperating delays will be prevented and the American merchant marine will occupy its true position, the leading one of the world.

A CORRESPONDENT writing to the Bristol (Tenn.) News from Crab Orchard, Lee county, Va., well expresses the coming sentiment of the South:

Our people, both Democrats and Republicans, are beginning to realize the benefits and advantages of protection. They are beginning to find a home market for their surplus productions. They begin to see the glimmering ray of light which will soon light up our valleys and mountain tops with the blaze of furnaces and manufactories. Our vast mineral deposits that lie hidden in our hills and mountains and visible on the surface, will soon be opened up. Enterprising men are investing to develop our resources of wealth. Protection brings capitalists and manufacturers to invest and set up among us their business houses, which employs our idlers, consumes our surplus, adds wealth to our nation and people, fills our country with money and cheap manufactured goods. Iron and other articles, such as wagons, carriages and farming tools will be made in our midst, for here are the ores and timbers suitable to make every kind of machinery and article we need.

THE American Association for the Advancement of Science, while in session at Toronto, Canada, recently voted into its membership several gentlemen distinguished for the additions they have made to scientific knowledge. Among those thus honored was Major Goldsmith Bernard West, chief of the MANUFACTURERS' RECORD's party of exploration, whose admirable letters which appear in our weekly issues are attracting widespread attention. Major West was assigned to Section I which takes cognizance of all questions of economic science. This compliment is a deserved recognition by his peers of the valuable work Major West has done and is doing for Southern development.

THE Commercial and Financial Chronicle reports the cotton crop of 1889-'89 at 6,935,082 bales (weighing 3,437,408,499 pounds), against 7,017,707 bales (weighing 3,406,068,167 pounds) as the crop for year ending August 31, 1888.

Not a Gouging Operation at All.

The Georgetown (S. C.) Enquirer says:

It cannot be denied that the protection sentiment is growing in the South, and it is another example of our folly. The North unloaded slavery on us and we paid a bitter penalty for cherishing that institution. Now we are about to adopt her protection fallacies just as she is about to cast them off like a worn-out garment. The North prospered under protection at the expense of the South, because the latter was a purely agricultural region. At whose expense does the South expect to prosper?

Nobody's, we answer. The South does not seek to prosper at anybody else's expense. Protection has made the North, with its limited resources but limitless energy, rich. What then can it do for the South with its numberless and boundless resources? The South can afford to look complacently on the prosperity of others. We have such vast undeveloped resources and so much pent-up energy that no human ingenuity or skill can prevent our leading the world, and we propose to attain this supremacy by honorable means. Protection happens to be one of these means. Let the North continue to unload its protection on the South. The columns of the MANUFACTURERS' RECORD show that we are growing richer every week by it.

Advertising Alabama.

The whole Northern tier of States is vigorously demanding closer and more cordial business relations with Canada. Both New England and the Pacific slope base their demands chiefly on the benefits expected to be derived from a removal of the tariff on coal. Last week while the congressional committee was in Boston investigating the subject of our relations with Canada, Senator Pugh, mindful of the rich coal and iron deposits of his own State, asked why, as a business enterprise, it would not be better for New England iron manufacturers to move to Alabama and establish themselves where nature has planted inexhaustible supplies of iron ore and fuel, rather than attempt to continue business so far away from the supply of raw materials. The witness replied that he was very glad God had been so good to the people of Alabama, and he hoped that they would take advantage of it. But he hoped the Alabamians would allow the people of New England to make use of the little natural advantage that God had given them. The idea of depopulating New England was not so popular in New England as in some other parts of the country. Senator Pugh remarked that pig iron could be produced in Alabama for \$8 per ton, whereupon the witness said he could guarantee Alabama good trade if she could lay down iron on board at that price.

If the good that the MANUFACTURERS' RECORD has done for the South could be bulked, it would represent millions of money.—Gainesville (Ga.) Industrial News.

SOME months ago the MANUFACTURERS' RECORD gave full particulars of the extensive enterprise at Liberty, Va., of Mr. Wm. R. Miller, of Baltimore. He had purchased a large tract of land at that town, which he was laying out into a beautiful park for fine residences, and had also purchased the noted Peaks of Otter, near Liberty, on which he proposed to build a large resort hotel. His whole scheme was conceived on a very broad basis and fortunately he was financially able to carry it through. But a few weeks after the MANUFACTURERS' RECORD gave the particulars of this enterprise Mr. Miller suddenly died. A private letter received from Liberty in referring to this, says: "While we have lost Mr. Miller whose entire sympathies and undivided efforts were enlisted in our behalf, we have gained his brothers who are carrying into effect his Longwood Park improvements, and I am exceedingly gratified at the spirit of liberality they are now manifesting, particularly as they are amply able to give full play to that spirit." The MANUFACTURERS' RECORD is glad to learn that these brothers, who are of the great dry goods house of Daniel Miller & Co., have placed the management of the Liberty improvements in the hands of Mr. R. Kenna Campbell. Mr. Campbell, who is one of the progressive men of that place, is just the man to carry out this enterprise.

THERE was much significance to a remark recently made by the representative of one of the largest stove manufacturers in Pennsylvania: "I used to have a splendid trade down South," said he, "but the Southern stove manufacturers have taken much of it away from me, I used to have customers in Texas who bought by the car-load and they still buy by the car-load, but from the Southern manufacturer, not from me. If I did not have an established run of custom here in the North, stove making would not pay as far as my Southern trade goes."

It is only a few years ago that the competition of Pennsylvania stove foundries closed up most of the foundries along the Hudson river, and now Southern stove foundries are fast pressing Pennsylvania foundries to the wall.

A FEW weeks ago the MANUFACTURERS' RECORD published a number of letters from the governors of Southern States, mayors of leading Southern cities and Congressmen as to their choice of location for the Exposition of 1892. Of the thirty-three letters published, thirty favored Washington and one each New York, St. Louis and Chicago. Since then a number of other letters have been received by the MANUFACTURERS' RECORD, and the total vote to date stands:

Washington.....	39
New York.....	7
St. Louis.....	7
Chicago.....	3

OURS BY RIGHT.

The Vast Trade of South America Must Be Secured.

Astonished at the Magnitude of the Commerce of Buenos Ayres.

A BAD SHOWING FOR AMERICAN VESSELS.

[For the MANUFACTURERS' RECORD.]

The most important question and the one that affects the vitality and general welfare of the manufacturing interests of the United States to the greatest extent to-day is how and where can we find a profitable market for the articles that we manufacture in excess of our own needs. We do one-fourth of the manufacturing of the entire world, and one-third of its mining. Our manufactures have increased so rapidly—adding to our national wealth until it now surpasses that of England—that they by far exceed the home demand. An over-stocked market necessarily reduces the price of any article to the bare cost of production, thereby crippling our industries to such an extent that barely living wages can be paid to employees. It is clear that unless we find a profitable foreign market for our surplus our manufacturing interests will soon suffer an almost irretrievable loss, with all its far-reaching injuries. South America undoubtedly is the field we are looking for, and a recent business trip to Buenos Ayres presented to my mind some astonishing revelations in regard to the character and amount of business transacted at that port. Buenos Ayres is the capital of the Argentine Republic; is situated on the Rio de la Plata, about 150 miles from its mouth, and had a population by the last census of 490,000; now increased to probably nearly 1,000,000. In common with a great many others, I had always considered Pernambuco, Rio de Janeiro, Montevideo and Buenos Ayres ports of minor importance compared with our North American ports, and my astonishment was complete when I arrived at the last-named place and found 800 foreign vessels discharging cargo at one time and 300 lying at anchor waiting for berths. Besides the vessels, there were magnificent steamers from England, France, Germany, Spain and Italy, each of which countries maintains from two to three different lines, but not one from our country. There were also at least 1,000 small and large schooners and steamers used for local distribution of freight up the Parana, Uruguay and Paraguay rivers, that flow into the Rio de la Plata. Out of more than eleven hundred foreign vessels then in that port, there were but fourteen flying the stars and stripes. England supplies that country with coal from Shields and Cardiff, cotton and woolen goods, steel rails and locomotives, iron beams, joist, girders and corrugated iron for building houses and bridges, and assorted cargoes of innumerable articles of merchandise, Germany being her only prominent rival. France, Spain and Italy send assorted cargoes of such articles as they excel in the manufacture of, and in commercial importance rank in the order named. The United States brought up the rear with thirty-five cargoes of pitch pine from the Southern States, about twice that number of spruce and white pine from the Eastern States, and several assorted cargoes from New York, consisting principally of kerosine oil and cotton goods. The Argentine Republic is strictly an agricultural country, exporting in large quantities wool, hides, horns, bones, tallow, hay, some peanuts, a poor quality of leaf tobacco, corn and wheat. They have no iron, coal or minerals of any kind developed, no oil wells, wood or natural gas, so they are dependent upon

other countries for manufactured goods. The freight alone on coal from England is nine dollars per ton, so it will at once be seen that it is policy for them, having no water-power that can be utilized, to export such raw materials as they have and import the manufactured goods. The fact that nature blessed that rapidly growing country only with a rich, fertile soil, and deprived them of the power to ever become our manufacturing rivals, makes them very valuable as customers, and should stimulate our merchants and manufacturers to the most assiduous efforts to obtain our share of that valuable trade. They regard the United States as the greatest nation on earth, and in every instance prefer our manufactures to others. An article made in the United States will sell more readily and bring a somewhat higher price than a similar article manufactured in any other country.

They have several tramway lines running four hundred street cars, and my attention was called by one of their very intelligent merchants to the difference in the construction and weight of the cars built in the United States and those made in England. He said: "An Englishman has an idea that anything to be strong must necessarily be large and heavy, while you Yankees have the faculty of combining lightness, strength and durability." It is a common saying in Buenos Ayres that "England and Germany run this country." Why should it be so when we are first of all the manufacturing nations of the earth? The South American trade naturally belongs to us, and why should we follow in the wake a long way off, when we should be in the forefront? The primary cause will be obvious to any business man who will visit that country. It is impossible to conduct business of any kind and keep abreast with strong competition without a correct and prompt delivery of the mail. We have no regular mail with the Argentine Republic except via Southampton, England. A letter mailed in Baltimore, by that route, will reach Buenos Ayres in thirty days, while one mailed at Newport News, Va., via Rio de Janeiro, will be six weeks on its way. England pays her steamship lines large amounts annually for carrying her mails, thereby enabling her capitalists to build fast steamers that will make the run in eighteen days. Congress expects our capitalists unaided to compete with foreign capitalists aided by their respective governments. There are millions of consumers in the states lying south of us whose profitable trade is daily enriching the Englishman and German. We have but a minimum share of that trade, and can not even hope to command an increase until our government shows a disposition to give here merchants and manufacturers equal facilities with foreign manufacturers. Let our National Congress pass a bill offering liberal ocean rates to American steamship companies for carrying the mails to Buenos Ayres and other South American ports, thereby evincing a willingness to pay, as other nations do for a share in that that immense trade, and it will not be long before we will have fine lines of steamers running regularly, and commerce will be bound to follow.

A. R. CAMPBELL.

WILMINGTON, N. C., Sept. 14, 1889.

The MANUFACTURERS' RECORD of the 7th inst. has a very interesting article on bear grass, which is a well known but not very much used fibrous plant of this State and the South generally. In Eastern Virginia twenty years ago there was hardly a garden which did not have in it one or two bunches of bear grass, which, on account of the toughness of its fibre, was used in many ways as a substitute for rope. It now appears that science may utilize this fibre to a greater extent than was dreamed of in olden times.—Roanoke (Va.) Times.

TEXAS GULF COAST.

Third Deep-Water Convention Called for October 1st.

Urgent and Pressing Need for a Deep-Water Port.

The Question Probably About to be Settled by Private Enterprise.

[Written for the MANUFACTURERS' RECORD.]

The question of a deep water harbor on the Gulf coast of Texas, which has for years agitated the Southwest, is brought into renewed prominence by the recent announcement of the deep water convention to assemble at Topeka, Kan., on October 1st. This is an outgrowth of former conventions. The first was held at Fort Worth, Texas, in July, 1888, and met in response to a call from the Fort Worth Board of Trade. This was followed by the convention at Denver in September, which adjourned subject to call. A call has been issued, and it is thought there will be an attendance of from 900 to 1,000. The list of delegates will include governors of States, United States Senators, members of Congress, representatives of Boards of Trade, and prominent merchants, manufacturers, railroad men and farmers.

It would hardly be possible to over-estimate the prospective value to Texas and the far West of a harbor on the Western Gulf coast of sufficient depth to admit seagoing vessels of deep draft. And it is staggering to contemplate the magnitude of the development that would center around such a port. With the continued growth of the Southwest and West the need for a tidewater outlet for the products of these sections involving less railroad haulage than is now necessitated, becomes more and more imperative and apparent. At a central point on the Gulf coast, the difference in distance as compared with New York in favor of Western points of shipment would be: Denver, 700 miles; Kansas City, 450 miles; Topeka, 500 miles; Omaha, 350 miles; Salt Lake, 750 miles; Santa Fe, 1,000 miles; San Francisco, 900 miles; Los Angeles, 1,150 miles. For the great and rapidly developing States of Texas, Colorado, Utah, Nevada, Kansas, Nebraska, and the territories of Arizona, New Mexico and Indian Territory, the Gulf affords the only natural outlet. The saving to this area in freight on products now bearing expense of long railroad haul would reach many millions of dollars annually. For Texas, in particular, this movement is one of tremendous import. With an area of 275,000 square miles, increasing rapidly in population and products, with agricultural products reaching \$150,000,000 in value a year, entering now upon an era of industrial development that will give it equal prominence in the production of iron and manufactured articles, with the certainty of becoming a large shipper of coal, the State must have its own outlet to the sea.

The construction of the Nicaragua canal will present to the Southwest enormous possibilities of trade that must be carried on through some port on the Gulf. The South American trade, which must increase every year, will largely center on the Gulf.

The only ports now open to the Gulf from the West are New Orleans and Galveston. The former is 130 miles from the Gulf, and sailing vessels have to be towed up the river for that distance. At Galveston, the freight of vessels of deep draft

must be lightered over a bar five miles out. The towage and lighterage expenses at these ports constitute a tax that goes far to offset the advantage gained by a shorter haul to the sea, and yet the advantage is still great enough to ensure to those cities an enormous shipping traffic. During the year ending June 30, 1888, the imports at Galveston amounted to \$715,000, and the exports \$15,700,000. At New Orleans for the same period the imports were \$11,617,000, and the exports \$80,788,000.

With deep water and consequent reduction in port expenses a large proportion of the meat and breadstuffs from trans-Mississippi territory now going East for export, would find the nearer way of exit at the Gulf.

It has been intimated that an effort will be made to have the Topeka convention declare in favor of a particular locality as the most suitable for a harbor. The East Texas Journal in a recent issue said:

"The Governor of Kansas has issued a proclamation calling a deep-water convention at Topeka, October 1st, at the request of Governor Evans, of Colorado, chairman of the executive committee. * * * Governor Evans did not suggest Topeka. He favored Omaha and Kansas City, and Mr. Noel, president of the Board of Trade of Topeka, was the power behind the throne, and Mr. Noel is the avowed enemy of all ports in Texas except Galveston. This is spoken by the card and may be relied upon as absolutely true. It is not prophecy, it is not guess work, neither is it imagination. More than one man belonging to the Texas delegation that attended the Denver convention in August, 1888, can testify to the fidelity with which he worked for the cities of Topeka and Galveston, and none were so unjust as to censure his course. He only did what other men were doing with might and main, i. e., he was working for personal interests, and but for his open declarations in favor of Galveston harbor he would have been made chairman of the Denver convention without a dissenting voice. As it was, the Galveston delegation cast a solid vote for him. * * * Mr. Noel is a big stockholder in the Atchison, Topeka & Santa Fe, the great syndicate that operates the Gulf, Colorado & Santa Fe, hence his uncompromising friendship for that road and for that port. The Atchison, Topeka & Santa Fe is the pride of the State of Kansas, and like the top of the letter T, Kansas stands squarely across the upper end of a line running north from Galveston. For these two reasons more than others she holds Galveston to be the central entrepot for the North and Northwest."

At the Denver convention last September, it was repeatedly charged, how justly I cannot say, that Galveston did not want deep water, and did not want the subject agitated, fearing that investigation by the Government with a view to concentration on some one place would lead to the selection of some other point than Galveston, and thus even its present shipping trade be lost. Governor Ireland, in a speech during the convention, said:

"When the gentleman made the assertion that we do not want deep water, but that we should go home and do nothing, I observed that a gentleman of the Galveston delegation applauded. I hope the rumor which is whispered that Galveston does not want deep water is not true. I hope that the Texas delegates will rise to the full measure of Texans and not be dwarfed by any shrivelled localism."

It is much to be hoped that the present convention will follow the impartial course pursued by its predecessor and not commit itself to any one port, but seek simply to impress upon the country the urgency of the need, and the magnitude of the movement. It would be extremely unfortunate if its efforts in this great cause were be-

littled by seeming to degenerate into a boom for some particular locality.

In a pamphlet recently issued by a committee of the convention it is urged that an appropriation by the government of \$10,000,000 to open up a harbor be asked for. The country will probably see many congresses come and go before a single grant of \$10,000,000 for one harbor will be made. There is no question, of course, of the righteousness of the demand. The matter is one of momentous concern to a large part of the South and the entire West, and these sections have had, in comparison with the territory east of the Mississippi and north of the Tennessee, a meagre share in the money expended for public improvements, yet the fact remains that if the country is to wait for this harbor until the United States shall have constructed it, it will wait many decades. The government has had before it for a generation a plea for money to build a ship canal across the Maryland and Delaware peninsula, a project in which it has been amply shown the whole West and Northwest is interested by reason of the cheaper ocean freights that would be secured, and yet every Congress has declined to appropriate a dollar, and the work, if ever carried out, will have to be undertaken as a private enterprise. Texas and the West cannot afford to wait for congressional aid. Without regard to the claims upon the government, it would be policy to go ahead and build the necessary works independently of the government. Aside from the benefits to accrue from the immediate construction of harbor facilities, and which should be a sufficient inducement to capital in the territory most concerned, the undertaking could unquestionably be made extremely profitable as a business venture. One such enterprise has already been inaugurated and is progressing rapidly towards complete consummation. I mean the work now going on at the mouth of the Brazos river, which, indeed, may settle the whole vexed question. This work was undertaken by a number of prominent gentlemen having large interests in Texas. Believing that the State would undergo more rapid development and their properties of various sorts become more valuable if Texas had an adequate seaport, they took upon themselves the work of seeing that this need should be supplied.

As a preliminary step in the movement, they employed competent engineers to explore the whole Texas coast and report to them the most feasible point for the construction of such works as would secure a large, safe and permanent deep water harbor. The place fixed upon by the investigating commission was the mouth of the Brazos river. Here the projectors were confronted with the fact that United States Engineers had reported unfavorably on the Brazos. They consulted Mr. E. L. Corthell, of Chicago, who had been Chief Assistant and Resident Engineer in charge of the construction of the Eads jetties at the mouth of the Mississippi, and is one of the most able and eminent members of his profession in America. When first approached he advised against the project, basing his belief that a harbor at the Brazos was not practicable on the reports of U. S. Government Engineers. On being shown, however, certain palpable errors in these reports, as determined by investigations of practical men, he consented to make a personal investigation of the locality and the difficulties to be overcome. His examination of the river for 30 miles and of the conditions at its mouth convinced him that the selection of this point had been wise, and that the claims made for it were amply substantiated. The inaugurators of the movement, therefore, decided finally upon the mouth of the Brazos, undeterred by the formidable obstacle of an adverse report by U. S. Engi-

neers. And not only had these reports been made, but their claims were reiterated after Mr. Corthell and other engineers had shown the entire feasibility of the plan. The ancient and traditional hostility and contempt for civilians entertained by officers of the army seems to have created and fostered as a sort of rule of ethics among the latter a refusal to recognize merit in anything coming from the former. The selection of the Brazos was made on the judgment of engineers as able as any in the United States employ, and of practical knowledge and experience. Mr. Corthell's report has since been endorsed by Sir Charles A. Hartley, of England, who is Chief Engineer of the European Commission appointed jointly by Austria, England, France, Prussia, Russia, Sardinia and Turkey, and charged with the execution of the works necessary to clear the mouths of the Danube.

It will be remembered that when De Lesseps promulgated the idea of a canal across the Isthmus of Suez, he was laughed at by the government scientists, who proved by lengthy and labored arguments, and elaborate arrays of figures, that the thing was impracticable; and the Mississippi jetty idea, when advanced by Eads, was denounced as a wild and visionary scheme, wholly at variance with all rules and natural laws. During the progress of both these great works, the learned officials of the government stood off and pointed out with pompous confidence wherein they must inevitably fail, and yet they stand to-day as monuments of successful achievement, triumphs of practical judgment and skill over theories of wisecracks, of the broader genius and the common sense of civilians over the rules and dogmas of official dignitaries.

This condition was aptly described by the Hon. Carl Shurz, in a speech delivered in the United States Senate in advocacy of the bill granting to Eads the right to construct the jetties:

"Thirty-seven years ago the engineer department of the army took the matter in hand, and for thirty-seven years they have been planning and reporting on the matter, and scratching and scraping at the mouth of the Mississippi, and to-day the depth of water is no greater than it was then. In other words, they have effected nothing. The population of the Mississippi Valley have long and quietly submitted to such a state of things. In the meantime, they have grown in numbers: grown enormously in prosperity and productive power. They have waited long and most patiently that the engineers of the army would discover and show themselves able to carry out a plan which would make the great river what it ought to be; but they have waited in vain.

"At last, after mature consideration—such as our committee has devoted to this great subject—it is proposed to furnish new light to penetrate our councils.

"Having for thirty-seven years permitted the engineers of the army to control this matter—with what success I have already indicated—they insist that the genius and skill of the civil engineers of America shall have an opportunity to compete with the army in the solution of this great problem. I desire Senators to remember the fact that this is, probably, the only civilized country on the face of the globe where such enterprises are left exclusively to military engineering. Even in those European monarchies, which are so military in their character, governments would not think a moment of excluding the civil engineer from public works which are not absolutely of a military nature. On the contrary, almost all; aye, I might say, all of such work is done by the civil engineer exclusively. Why should this republic, then, rely upon the military alone? We ask for a commission of engineers to examine the different methods of opening the mouth of the

Mississippi which have been proposed: we ask that the military engineers, who have occupied themselves so many years with this problem, shall have two men on that commission to represent their views; we ask that another body of government officers of recognized skill, members of the coast survey, shall have two members. But then we insist that the civil engineers of America, more numerous, and perhaps more experienced, than either—men who have planned and achieved greater enterprises than either, men who have tunneled our mountains, run our railroad tracks thousands of feet above the level of the sea, built the foundations of our magnificent bridges, and whose triumphs are among the most resplendent glories of the republic—we insist that they shall have an opportunity to offer their genius and skill to the country, and have a representation worthy of them on this commission."

The conditions in the matter of a Texas harbor are analogous. For fifteen years or more the government has been fooling with the Texas gulf coast, and has frittered away in ineffectual work between three and a-half and four million dollars. The engineers have shifted from one point to another, digging a little here and building a few hundred yards of jetty there; fixing upon some locality, and after working at it in a desultory sort of way for a few years and spending a few hundred thousand dollars, abandoning the whole thing and moving off to some other place to begin at it all over again. As a result of all the work that has been done, based on "official" investigation and "reports," and directed by official science and skill, the greatest depth of channel into any Texas harbor is 12½ feet at Galveston, and this is just the depth of channel that Galveston had more than 10 years ago. Could any possible array of arguments more forcibly emphasize the unwisdom of trusting to the general government to provide the harbor facilities for which such pressing and growing need is felt?

The projectors of the Brazos plan, warned by the history of this and of government work in general, wisely determined to do the work themselves, and thus ensure its early completion and the enjoyment of the resulting benefits. They organized a company and went to work, asking from Congress no aid whatever, but merely the privilege of being allowed to make the harbor. To obtain this a bill was introduced and passed, granting to the company the right to construct, own and operate such permanent and sufficient jetties and such auxiliary works as might be necessary to create and permanently maintain a navigable channel at the mouth of the Brazos.

To prevent possibility of any advantage being taken of this franchise, the bill provided that unless work was commenced by a certain stipulated date, and completed within a certain stipulated time, the privileges granted should be forfeited. And to prevent any possibility of excessive exactions, it was provided that only such tolls should be charged as might be prescribed by regulations to be made by the Secretary of the Treasury, the tolls standing in place of municipal port charges exacted in all seaport cities. The bill also reserved to the Government the right at any time to pay the company the value of its jetties and other works and assume ownership and control of them, all right to the franchises and works on the part of the company to cease. Under this authority, the company has undertaken, as a business venture, to provide such a depth of water and all port facilities as will meet every requirement of the most extensive ocean commerce. They did not even ask that the government agree to reimburse them for money expended when a harbor should have been provided. As soon as charter and government franchises were secured actual work was com-

menced, and has been energetically prosecuted without intermission up to the present time. Five hundred men are now at work on the jetties and other works. The monthly pay roll runs from \$75,000 to \$100,000. On the first of the present month the jetties had been constructed to a point about 3,000 feet from the beginning. When the work commenced the average depth of water at the bar was nine feet. At the same point they now have twenty feet. By January 1st the company expects to have a channel of 20 feet depth from deep water in the Gulf to the mouth of the river, and it will commence the erection of docks and wharves for the accommodation of shipping.

It is an interesting fact in this connection that Columbia, the first capital of the Republic of Texas, is on the Brazos river, about 35 miles from its mouth. The old capitol building is still standing. Velasco, at the mouth of the river, was the earliest seaport of Texas, and flourished over 60 years ago. As late as 1840 all of West Texas was tributary to Columbia, and the business of the interior with the outside world was carried on by means of vessels that discharged and received cargoes at Columbia. It is a significant circumstance that it is the mouth of the Brazos that the old "Texas Fathers" selected as the best harbor on the coast. The building of railroads through the interior opened up other routes of travel and traffic, and diverted business and development from the coast. This is a case not unlike that of Cumberland Gap, told of in last week's issue of the MANUFACTURERS' RECORD, and there are other instances of how, in the early days of the railroad era, trade was diverted from established seats and highways which now are emerging from their long obscurity and by means of railroad connections are rising to assume again the prominent places they formerly filled, and to which they are by natural laws entitled.

The example of the Brazos company is commended to the advocates of other localities. It seems probable that Brazos will be the port that has been so long sought for, and that about it will gather such an aggregation of the varied forms of industry and trade as will make it a Chicago of the Southwest, from which shall spread encircling waves of undreamed of development and prosperity. Still the success of Brazos need not deter the other aspirants from continued effort. Rather should the enterprise and energy and nerve and public spirit of its authors stimulate Galveston, Sabine Pass, Aransas Pass and the others to a like exhibition of their confidence in the feasibility of the harbors they advocate. Take Galveston, for instance. If men, whose interests in the State aggregate probably less than \$10,000,000 can undertake the construction of a harbor as a business venture, with a view to making more valuable their interests, surely Galveston with its \$40,000,000 or \$50,000,000 can take a similar risk. Remembering the interminable length of time consumed in the construction of works of public improvement undertaken by the government, the weary waiting for appropriations, the long deferred beginning of work, the slow methods, the endless rolls of red tape to be unwound and all the causeless and long delays, it would surely seem that the immense interests involved would lead to more definite and energetic action than appeals to Congress. If deep water across the Galveston bar can be secured and permanently maintained, then the construction of such works as will accomplish this would prove a profitable investment for Galveston or outside capital, or if private capital of Galveston declines to thus show its faith in the undertaking, the immeasurable benefits to enure to the city in the building up of a great shipping business would justify the outlay on the part of the municipal

authorities. The harbor of Baltimore, for instance, is maintained largely by municipal expenditure. The United States government, it is true, does something towards maintaining the present depth and width of the ship channel, but the city finds it profitable to supplement what the government spends by large annual appropriations out of its own treasury.

That a harbor on the Texas coast capable of accommodating ocean shipping is more urgently needed, and by a larger area than any other great work by any section of the country; that the United States Government owes it to the people of the vast area of territory interested to provide fully and without delay for this want, are unquestionable facts, but it is also unfortunately a fact that if Texas had to wait for its port until it shall have been procured through governmental action, it would wait until the need for it has been overcome by the diversion of the course of development to other directions. Fortunately this possibility is removed by the work of private effort and capital at the Brazos. Now let others take up the work at other points, if there is need of further facilities, and if there are available localities.

WILLIAM H. EDMONDS.

Advantages for Cotton Manufacturing at Denison.

The Denison (Texas) Land & Improvement Co. believe in making careful investigations before advising investments in new enterprises. Wishing to organize a \$500,000 cotton mill company, they employed a New England expert, who has had over 35 years of experience in cotton manufacturing in that section and in the South, to make a careful examination as to the desirability of building a mill at Denison, and his report sums up the advantages of the place for a cotton mill, with the following strong points:

1. It has a mild and healthy climate, free from malaria, and well adapted to the successful working of cotton machinery. Artificial heat in the mill can be dispensed with to a considerable extent in winter, as the climate is not subject to low temperature.

2. The power required to drive machinery will be furnished by cheap coal, brought from the Indian Territory at a cost of about \$2 per ton, delivered in Denison.

3. Building material can be contracted for at comparatively low prices, and of good quality.

First quality lumber, dressed suitable for girders, floors, columns and roofing, at \$16 per M.

Bricks, laid in a superior quality of lime, at \$9 per M.

Dimension Rubble stone work in wall, for large buildings, per perch, \$2.25 to \$2.50.

Best I. C. tinplate roofing, with raised seams, \$5.35 per squares.

Laborers per day, \$1 to \$1.25.

Carpenters per day, \$2 to \$3.

Brick masons per day, \$3 to \$4.

Stone masons per day, \$3 to \$4.

4. Cotton of the best spinning quality can be laid down in Denison for about \$6 per bale less than in New England.

5. The manufactured goods will find a home market for consumption in Texas and the Indian Territory, thereby saving freight and commission.

6. The operatives will be supplied from the native white population of Texas, and will, when learned, make good and reliable factory hands. Denison being a healthy locality, an abundance of laborers can be depended upon, which will contribute to the successful working of a cotton mill.

There are no labor organizations in Denison, and it will be a long time before there will be trouble from the combination of labor.

POWELL'S VALLEY

A Land of Plenty, with Fertile Fields and Fat Cattle,

Surrounded by Mountains Burdened with Vast Stores of Iron Ore.

AN IDEAL COUNTRY FOR MANUFACTURES AND AGRICULTURE.

The Manufacturers' Record's Exploring Party at Work.

HEADQUARTERS MANUFACTURERS' RECORD'S EXPLORING EXPEDITION.
BIG CREEK GAP, TENN.,
Sept. 7, 1889.

With a sense of regret, combined with a little stiffness about the nether limbs, we abandoned the sylvan vale and the crystal spring by which we had dined, and were soon in the saddle again. Our road now lay directly through the Gap, the lowest in the mountains probably, because it is little above drainage, the creek running through it from the south having an apparent fall of fifty or sixty feet to the mile. There is a fair amount of valley and low bench land on the western side, while towering cliffs something like 2,000 feet high overlook the creek and road from the east. One might go farther and fare worse in looking for a desirable site for industrial development. There is a pretty plateau, sufficiently above the stream to preclude overflow, and yet commanding its ample supply of water, which should constitute an ideal location for manufactures. Here it is probable that furnaces and foundries, rolling mills and other iron works, may be established in the future, based upon the neighboring red fossiliferous ores, and the Whitley county coking coals, also nearby. The area suitable for manufactures is not confined to the plateau, but extends along Big Creek for a mile or two.

Whatever may be the ultimate extent and development of the iron industry here, I think it would be impossible for anybody to ride over the country without becoming impressed with the remarkable advantages it offers to the establishment of a large wood-working industry. The mountains are practically all accessible to the timberman by good logging streams. There is ample water-power or cheap coal for saw mills and planing mills. The timber has been little culled and the large growth, sound body and fine grain of the local oak, chestnut oak, ash, maple, walnut, hickory and poplar, should, all together, bring the Big Creek territory to the immediate and serious attention of furniture, coffin, wagon and agricultural implement makers. The single item of chestnut oak, which here appears to be of superior excellence, is something of importance. This wood is now being used extensively in the production of costly antique oak furniture, and interior finish for houses. It is unusually plenty hereabouts, and both for the purposes named and tan bark, is valuable. I am told that representatives of several Northern and Western furniture and farm machinery corporations have made inspections lately, with a view to possible practical developments. With sites, power, water, a delightful, bright mountain cli-

mate, and a fertile country to feed from, it would seem hard to conceive a better environment for such industries.

Another mile of easy road winding through just such surroundings brings us to the lower mouth of the Gap, and into Powell's Valley, famous for the beauty of its scenery, the productiveness of its soil and the thrift, plenty and prosperity of its agricultural community. Exceptionally wide—as much as 90 miles in places—this Valley extends from Careyville, East Tennessee, Eastward under the shadow of the Cumberland mountains to Big Stone Gap, a distance of about a hundred miles. It is watered by the Powell river and other streams, is dotted everywhere with pure, bold flowing springs, and is to all appearance as fertile as the Blue Grass regions of Kentucky or Middle Tennessee. Here one bids temporary farewell to log cabins and stump fences. The inhabitants live in substantial brick or frame farm houses, backed by huge barns fitted with every modern improvement. Emerald pasture lands, alternate with fields of waving grain and maize. Fat cattle and horses of gentle blood are encountered everywhere. Now and then you pass by a private fish preserve, filled with carp and bass. The rattle of reaper and sulky plough and thresher can be heard echoing across the champaign—until you begin to think yourself in Western New York or Pennsylvania, instead of in the supposed wilds of Eastern Kentucky. Should you try to buy some of this Powell Valley land, the impression would go deeper. You would find that fifty dollars per acre is the lowest, and an hundred not an uncommon figure for it.

All this is in Campbell County, Tennessee, and Jacksboro, five miles East of Big Creek Gap, is the county seat. Still three miles Eastward again and there is the town of Careyville, on the East Tennessee, Virginia & Georgia Railway, distant from Knoxville 35 or 40 miles. The distance from Big Creek Gap to Cumberland Gap, by way of Powell's Valley, is about 37 miles. These points will perhaps serve to fix the geography of the locality in the mind of the reader, who, albeit well tired with the day's journey under a rather hot September Sun, must journey up the said Valley with us for a space, and up to the ore outcrops and openings.

I have remarked in a previous paper upon the Cumberland Uplift, which on this side of the range has brought up the Clinton formation of the Upper Silurian with its store of red fossiliferous iron ore—the ore which forms the principal ore supply of the Birmingham district. Powell's Valley, fortunate in other respects, is especially so in having a well-defined horizon of this red fossiliferous ore along its mountain edge from Big Creek Gap to Cumberland Gap, and we are assured that the Big Stone Gap country has it too; but of the latter we can only speak after a visit and examination. But both at Big Creek and Cumberland we have seen it. By the same token here we are very near to one of its best manifestations. A short trot across country, and over a foot hill, brings our party to the foot of the mountain, up the side of which the horses scramble for a few minutes, and we sight the opening itself, and the only one I shall describe as all we visited on the lead for a distance of several miles were substantially the same. The one we are at is three and a-half miles east of Big Creek, and eight and a-half from Jacksboro. The opening had been driven in far enough to show the normal stratification of the Clinton horizon, and the first view of the outcrop was calculated to be sensational. Just here a local fold made the ore appear to be over 16 feet thick, as doubtless it is for some little distance, but allowing for the extra butter on the bread, it was easy to see that the seam was safely six feet thick. This view was corroborated by examination of other open-

ings, and remembering that I am inclined to believe the statement of prospectors and others, with whom I talked whenever chance offered, that the seam can be traced at practically the same thickness for a distance of twelve or fourteen miles.

Down in the Birmingham district, when we go into the woods to hunt red fossiliferous ore, we pick him up gently, and, with a firm yet rapid motion, scratch his back with the milled edge of a silver coin. If the result is a bright red mark, we assume that his percentage of metallic iron is not far below 50. I applied this test to numerous pieces of the Powell Valley ore with entirely satisfactory results. I could not get any analyses, but have sent to have them prepared. A number have been made at various times and people whose information and knowledge of the subject give me confidence in their opinions and statements, say that the ore carries from 50 to 52 per cent. metallic iron. I shall not be surprised if it prove so. As to other constituents of course one can do little but guess. The Powell Valley ore, except a small portion of the lower part of the seam did not appear to be unduly silicious. In a general way it presented to my mind the familiar aspect of a fair average Birmingham red ore. I much regret the absence of analyses, but unfortunately we do not find everything to hand in the way of such information in districts not yet much developed. However, it will be a good time to reopen the subject and to give them in comparison with the same ores near Cumberland when we go there en route to Big Stone.

Reference has been had to the Oriskany ores which show such thick outcrops at Pineville and Cumberland Gap. The same horizon is found in the Big Creek region, but no openings have been made, and we did not take the trouble to go up to the plane at all. Very practical tests in the way of following these outcrops into the bowels of the mountain have been conducted by the American Association (Limited) near Cumberland. It is better to reserve judgment until these openings have been inspected. In all cases, however, I should say that people in the iron interest would regard the possession of a horizon of red fossiliferous ore of good quality as a matter of far greater importance.

The shades of night were beginning to fall when we "trekked" for Jacksboro, loping at a lively rate over the excellent State road that traverses Powell's Valley. Darkness overtook us before we reached the village, and its lights were welcome to the squadron, who had been in the saddle all day over a "stiffish" country, and, notwithstanding stops, had accomplished a good thirty-five miles. A hospitable, clean inn, kept by educated people, a hearty wholesome country supper, preceded by something with a sprig of native mint in it—all these things made us forgetful that chairs did not seem as soft as common. Early in the game the boys disappeared, and there speedily went up from that hostelry a full-voiced hymn of thanksgiving to the god of sleep, in a grand chorus of snores—for male voices only.

Elk Valley, with the special lead of red ore it shows, is the next number on the programme. The mists have hardly made visible the mountains when we are mounted and off for the work. The road runs over Cumberland Mountain immediately by a point of rocks from which the Powell Valley with its farms and groves, cross roads settlements and villages are all plainly laid out at your feet. But before we reach even the first ascent, Mr. Hutchcraft of the Procter Mines deflects our route to the site of a sanitarium that a Louisville, Frankfort and Lexington syndicate proposes to build at a point where five fine mineral springs break out from the ground within a radius of fifty feet. A charming tract of rolling land, valley and foot hill, has been secured

for the purpose. Groves and turf cover the face of the area. Above the everlasting cliffs look down, while below the broad, cultivated vale with its background of verdure-clad ridges spreads before you. A large hotel, park, deer park, drives, casino and all the other appurtenances are in contemplation for the behoof and benefit of such bibulous strangers and sojourners as desire a place of resort where they may enjoy a choice of beverages between iron water, magnesian water, blue sulphur and white sulphur water, and just every day pure freestone water, "always on tap." This project I dare say is intended as an adjunct to the manufacturing and residence town which the same syndicate are preparing to erect at Big Creek Gap, five miles up the Valley. For the last named purpose they have, in gap and valley together, a matter of several thousand acres, including every sort of location, topography, facility and so on. It is not our province to boom future townsites, but it seems probable that every one of the practicable passes through the Cumberland and Pine Mountains must become the seat of industrial and commercial development, and, conceding that, Big Creek Gap ought to stand an excellent chance, in view of its exceptional advantages in the way of command of ore and coke, lumber, water power and many other things.

Although it is but an hour after breakfast the genial morning Sun has made us thirsty, and a good long draught of each of the five waters is acceptable. The ascent is resumed and rapidly becomes a perpendicular climb; but it has its relief in a pause upon the summit, from which a panoramic view of the country is a pleasure not to be treated lightly. The cliff from whose brow the traveler gazes down upon Powell's Valley, is about as high as the Pinnacle at Cumberland Gap. A wide range of territory is disclosed, unobstructed by any high mountains to the Southward, if we except the few distant, hazy peaks of North Carolina. Beyond the first low ridge there is a silvery fog hovering over the line of Powell's River, and, still beyond another, which marks the course of Clinch River; then ridge upon ridge, until the lines run together. Cumberland Gap could be seen to the left, but for a jutting spur. On the right the line of the East Tennessee, Virginia & Georgia Railway can be traced miles upon miles, while its heavy trains, drawn by giant Mogul engines, look like the little tin cars we used to pull around by a string when we were babies. In point of fact the scene is too bewitching for people who have earthly, sordid mineral business in view, and so we leave it with extreme reluctance and continue our journey, the road leading us through a large plateau on the top of the mountain known as the "flat woods." Here is a territory quite unique. It is as level as a floor and its extent is thousands of acres perhaps—it seemed so, riding through it. Once or twice we chanced across a small cabin, but animate life was generally represented by herds of cattle peacefully browsing on the juicy mountain grasses and fighting the less juicy flies. It is said, and I believe it, that there is not a finer place for all sorts of fruit culture than on this exalted plateau twenty or more hundred feet above the circumjacent valleys. What a pleasure garden a few bold Swiss families could make of it one can imagine if he happen to have seen the works of such immigrants in Laurel and Boyle counties, Kentucky. As it is the area is waste, and relegated to a few kine and a growth of pine.

Horses pick their way down the mountain and start up again, for it is necessary to make another lift and fall before we may hope to strike Elk Valley and track to-day's game. The way is much like the way of yesterday, and, in due time, it is conquered. "Blossom" of red ore seen in

the roadway is premonition of arrival at the proper spot. A word of general explanation may help at this point. Cumberland and Pine Mountains with a narrow trough between, at least in this district, represent the Cumberland Uplift, so called. This uplift, as explained, brought up the Clinton ore deposits on the south side, and according to geographical theories ought to have brought it up on the northern side of Pine Mountain. In the Elk Valley, which has Pine Mountain on one side and an offshoot of the same on the other, the formation does not appear to have come up with the main ridge but to have gone under Elk Valley, or what is now Elk Valley, and outcropped just beyond in the minor mountain. Not much above local drainage the red fossiliferous ore makes its appearance. There is an interesting opening on it which was the first we visited. At this place the ore is in excellent position, the stratification perfect, no evidence of disturbance, and from 18 to 20 feet thick. Other openings, having washed in somewhat, the full width of the seam could not be decided, but appearances were that it persisted at a width of 15 feet or more for quite a distance. The country road runs over the exposed bed of the vein for perhaps a mile in one instance, and the ore is everywhere on either side, traceably for as much as six or seven miles. Where it can be examined it has an identical appearance with the horizon on the Powells Valley side. The simple test I have mentioned being applied to it, it showed up just about as its trans-Cumberland congener did, and we were informed that analyses were nearly identical. In this case, too, I have sent to have reliable analysis, which will be published later on.

Elk Valley, Big Creek Gap and Powell's Valley will all be benefited by the construction of a line of railway, now projected along Powell's Valley to Cumberland Gap. At present the transportation system is not bad. The E. T. V. & G. runs along Elk Valley and so near to the rest of the ore, that the entire territory is brought within no haul at all of the coking coals of the Williamsburgh end of the Jellico district, while it may be said that good coking coals are now being found within a very short distance of the Elk Valley hematite. With the facilities afforded by the L. & N. and E. T. V. & G. system, and such other transportation developments as may be fairly expected, it is no doubt but fair to predict for the region comprising the Jellico mines, with their superior domestic, steam and canal coals; the Williamsburgh-Mahan area of the Elkhorn coking coal; the unique Birdseye coal; the Big Creek, Powell's Valley and Elk Valley red ores, and the grand resource of splendid timber topping all of them put together, an era of extensive and rapid development. This is one of the districts our Eastern friends should never fail to visit whenever they chance to take a journey toward the South.

GOLDSMITH BERNARD WEST.

NICHOLASVILLE, KY., Sept. 10, 1889. We have the contract to build the railroad between Richmond and Beattyville for the Richmond, Nicholasville, Irvine & Beattyville Railroad from Nicholasville to Richmond, 24 miles, upon which we have been working for the last 6 months, and the grading, masonry, tunnelling and trestle work of which we have now nearly completed, track-laying having begun from this, the Nicholasville end, last week. We have recently been given an additional contract for the road from Richmond to Nicholasville, 57 miles in extent, and expect to have the entire road completed from Nicholasville to Beattyville by next June. There remains still 16 miles between Nicholasville and Versailles, which it is thought we will be asked to build next spring. D. SHANAHAN & CO.

Manganese in Arkansas.

ANTIMONY, ARK., Sept. 11, 1889.

Editor Manufacturers' Record:

Recently in your columns I noticed that since April 1st three cargoes of manganese have been received in your city from foreign countries for manufacturers in Pittsburgh. This looks strange to one who has acquainted himself with the character and amount of manganese found in the adjoining county of Polk. These deposits of manganese merit immediate and careful attention, since but little doubt exists but that they are equal to, if not superior to, any ever found. The manganese mines near Batesville, this State, are said to be of a pockety nature; those found in the western part of the State present the appearance of being in vein formation. Samples in the postoffice, at this place, are of the very richest character, and the ores are found in abundance a few miles north and northeast.

Of the antimony, the production for the last two weeks is simply wonderful. Large quantities are being mined daily, and the ores very rich. Shipping antimony from here will begin within thirty days, when the outside world will begin to realize the wealth here existing.

Railroads are being rapidly built into this mineral region, and the valuable resources of Western Arkansas will be unlocked, and millions of money profitably invested therein with the opening of facilities for transporting the products may be reasonably expected.

B. F. KENNEDY.

Industrial Notes from Decatur.

NEW DECATUR, ALA., Sept. 14, 1889.

Quite recently J. D. Jervis & Co., of New Decatur, Ala., made a contract at Atlanta, Ga., with Nicholas Ittner for the mill work of the government barracks and officers' quarters at Atlanta, to the amount of \$15,000. The contract is for sash, doors, blinds, stairs, inside finish, verandas, and general mill work.

The same firm is also figuring now with the contractors for a similar set of buildings, and a contract of about the same size, which will be let in a few days. These last buildings also will be constructed on government ground in Atlanta, Ga.

The same firm has large contracts at Athens, Ala., and at Florence, Ala.

The United States Rolling Stock Co. lately received from the Louisville & Nashville Railroad Co. an order for 250 freight cars.

Messrs. Howell & Winter, the former of Rome, Ga., will buy cotton at New Decatur this winter. It is estimated that about 35,000 bales will be compressed here this season.

The Decatur Lumber Co. are expending \$40,000 in enlarging and improving their plant.

The foundations of the \$20,000 public school building, the Northern Methodist Church and the Congregational Church are about finished. Work is being pushed on each of them. The Presbyterian Church and the Southern Methodist Church are just completed.

The pay-roll of the shops now in operation here is over \$75,000 per month, or about \$1,000,000 a year—more than the total assessment of the entire county two years ago. Within the past two years there has been invested in New Decatur alone \$2,000,000 in cash in manufacturing plants; this excludes stores and dwellings.

The fine handsome brick stores, part of the projected Casa Grande Hotel, are being finished by Messrs. Vassault & Bassett, from Flint, Mich. A large number of dwellings and other storehouses are in course of construction.

On September 2 the Louisville & Nashville Railroad made New Decatur the end of its division, instead of Decatur. This

will cause engines to be exchanged at New Decatur, and all trains will stop at New Decatur for meals, "The Tavern" being the attraction. Free wagonettes will carry the passengers from depot to "The Tavern" and return, a distance of three blocks, "The Tavern" rivals the best Florida hotels, and will be the half-way and resting place for Northern visitors to Florida.

The Great Progress Made by Fort Payne.

FORT PAYNE, ALA., Sept. 9, 1889.

Editor Manufacturers' Record:

We wish to give you facts regarding the outlook for business here, and to be brief would say: In February last Fort Payne had 531 inhabitants; to-day 2,500. Since April last \$15,000 has been expended on her avenues and streets. A complete water works system has been built at a cost of \$45,000. A fire-brick plant has been built and nearly completed to cost \$40,000, and capable of turning out 20,000 of best quality fire-brick per day. A stove plant is in process of construction to cost \$8,000. An ice plant and cold-storage plant is completed at a cost of \$12,000, with capacity of 10 tons daily. A blast furnace is being built at a cost of \$100,000. A first-class rolling mill and steel plant will break ground this month; also a large machine shop and edge-tool plant will be erected in October. These different industries, together with our carriage shop and planing mill, will employ from 1,500 to 1,800 hands. The Hotel DeKalb has been completed, the mineral railroad is under way, the electric-light plant built and a dummy line organized. This much is established beyond question, as nearly every dollar is subscribed for the different enterprises, and their completion is only a question of time. The discoveries of coal and iron assure us beyond question that there are unlimited amounts of each, in quantities sufficient to last for generations.

Regarding the future, we believe the history of the past six months is so flattering that we may say the past record is only a faint index of what we may look for in the near future. With 1,500 hands employed it must bring 6,000 people with it, and from the hundreds of letters received recently we are warranted in the expectation that the fall and winter months will see a larger influx of people here from all parts of the country than was ever witnessed in the South. We have reason to believe that Fort Payne will show a population of 10,000 people in 16 months from to-day. It has been the intent and purpose of the Fort Payne Coal & Iron Co. to establish the city upon a solid basis, not to the advantage wholly of the speculator, but that people might realize their sincerity of purpose, their chief endeavor has been to establish strong and growing industries, and we challenge any town or city in the South for a showing equal to Fort Payne. The principle first adopted by our company was that whenever anyone would bring forward any business which could be shown as profitable and deserving the attention of our different stockholders, we were willing to advise their support, and that same principle holds good to-day, and should anyone present a feasible plan for manufacturing at any time, our stockholders stand ready to advance any amount in the furtherance of such scheme. All we ask is that all who may desire to know of Fort Payne may come here and look for themselves, and we feel assured from our record of six months that they will say what we believe to be an undisputed fact, that Fort Payne is the coming city of the South.

FORT PAYNE COAL & IRON CO.

If you are not already a subscriber to the MANUFACTURERS' RECORD, send us \$4 and you will receive it regularly for one year or six months for \$2.00.

Morristown, Tenn.

The Plateau City of the Great Valley of East Tennessee

is beautifully located on a plateau of Bay's Mountain, about equi-distant from the Cumberland Mountains which bound East Tennessee on the northwest, and the Alleghany Mountains which bound it on the southeast, and is 300 feet above Holston River, which washes the north base of the plateau three miles from the city. Its mean elevation above sea level is about 1,350 feet, while the hills and mountains immediately surrounding it rise to an altitude of 1,935 feet, affording views of surprising extent and grandeur, and at the same time so modifying the temperature that the thermometer rarely registers higher than 90° in summer or lower than 10° in winter. Its drainage is admirable, and malaria is unknown. It has nearly trebled its population since 1880, having now about 4,000 inhabitants. It is the commercial and business center of the richest and most extensive agricultural district in the State, where all the cereals and all the grasses

and tobacco are grown to perfection, and where fruits and berries abound. It has hundreds of thousands of acres of uncultured forests accessible to it, abounding in Poplar, Pine, Hemlock, six varieties of Oak, Chestnut, Hickory, Cedar, Maple, Birch, Beech, Sycamore, Gum, Locust, Laurel, Buckeye, Mulberry, Ash, Cherry and Walnut. The Celebrated East Tennessee Marble underlies a part of the city, and it is surrounded with rich deposits of Iron Ore, Manganese Ore, Zinc Ore and Lead Ore. It has been said by one who has made a study of the subject, that within a radius of 50 miles around Morristown every variety of iron ore in the United States can be duplicated, and a coke can be made equal to Connellsville coke. We claim without hesitation that Morristown has in its immediate vicinity richer mineral ores, and a greater variety of them, than any city on the Continent.

MORRISTOWN

has Railroad Facilities equal to any city between Lynchburg and Chattanooga, and they will be speedily increased by the completion of the Carolina, Cumberland Gap & Chicago Railway, making the shortest possible railway route between the great cities on the Ohio River, Cincinnati and Louisville, and the seaboard cities, Charleston, Port Royal and Savannah. Besides, the Baltimore & Ohio Railway will probably extend a branch to it from Lexington, Va., and the Tennessee Midland will in all probability be built to Morristown, and a line be built giving direct connection with Atlanta.



MAP SHOWING RELATION OF MORRISTOWN TO THE COUNTRY AT LARGE.

MORRISTOWN

has a citizenship composed almost exclusively of native born Americans. It boasts a splendid system of Graded Schools, Five Commodious Brick Churches, the finest Courthouse in Upper East Tennessee, an Opera House that will seat 600 people, two Solid Well Managed Banks, a flourishing Building and Loan Association, two of the Largest Commercial Flouring Mills in the South, Stone Works, an Agricultural Implement Factory, two Woodworking Factories, a Tobacco Factory, a Carriage and Wagon Factory, and many industries of lesser note.

It is lighted with electricity, and has water works under contract, and is now inaugurating a system of street railways. Its climatic advantages, its unsurpassed record for healthfulness, its abundance of pure water, its central and beautiful location, its transportation facilities, its fruitful agricultural surroundings, its contiguity to rich and exhaustless fields of iron, manganese, zinc and lead ores, marble, coal and timber, mark it as a place destined to be the commercial, manufacturing and railway emporium of Upper East Tennessee, Western North Carolina and Southeastern Kentucky.

To expedite this destiny the city authorities have wisely exempted from taxation for ten years all manufacturing establishments that will give employment to fifteen or more persons, and the county authorities have done the like, so that manufacturing establishments will be exempt from all taxation for ten years, except the merely nominal tax for State purposes. There has been no "boom" or inflation of prices at Morristown, and, as it possesses within itself and contiguous to it almost every element of wealth, it now presents the most inviting field for investment of any city in the South.

Persons who may desire fuller information can obtain it by calling on or addressing

MONTVUE LAND COMPANY

POSTOFFICE BUILDING,—MORRISTOWN, TENNESSEE.

Anniston

THE CENTER OF
Iron and Cotton Industry
AND MINERAL WEALTH.

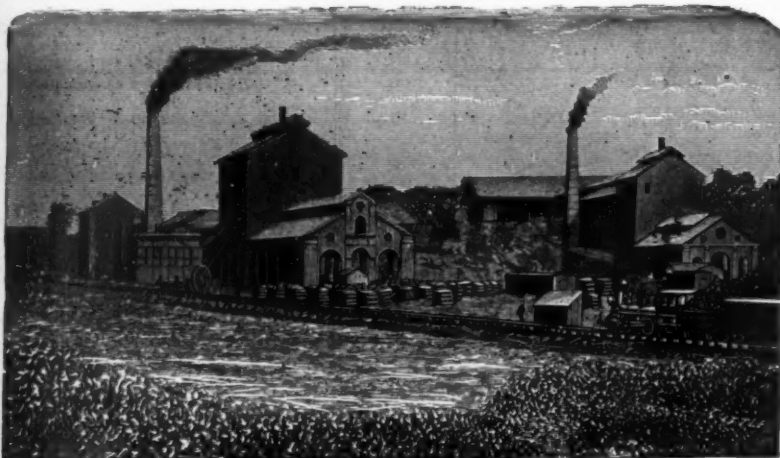
"The Model City of the South."

IT IS

The Profits of Labor only that can add to the wealth and prosperity of a nation or community. It is this only that can make business successful and profitable, sustain and add to the value of real estate.

WHERE

Nature's resources are greatest, where nature's capital in rich agricultural lands, and where iron, coal and other useful minerals are most abundant, most accessible and of superior quality for all purposes, there will capital find its safest investment, largest returns and labor reap its richest reward. It is to the Anniston District where the best professional mining engineers and experts of the United States declare the great center of the Iron Industry of the South will drift, where its manufacture will be most permanent and profitable, and where ores in the greatest abundance and accessibility exist, and where they will be most easily mined, that this applies.



WOODSTOCK FURNACES—ANNISTON.

The Development of the Past Fifteen Years

Confirms all this, and every year convinces the experts of the correctness of their judgment. It is no longer opinion based on scientific and practical education; it is a fact that is clearly and successfully demonstrated, so that the visitor to the Anniston District can see at every step. The four iron furnaces that have been so long and successfully operated, and the new plant now being erected, and rapidly approaching completion, which will be capable of producing one hundred thousand tons of pig iron a year, demonstrate that

NOWHERE ELSE IN THE SOUTH

Has the iron industry been so profitable and so successful, or been established on so permanent a basis, and of no district is it so universally conceded by all, while nowhere else have arrangements been perfected and already established on so complete a scale to work the crude iron into higher branches of manufacture to increase its value, and to bring into the district the profits of skilled labor. THE GREAT CAR WHEEL WORKS OF NOBLE BROS. & CO., their rolling mill and steam forge and machine shops, and the Alabama Car Works, have been absorbed by the

UNITED STATES ROLLING STOCK COMPANY,

With a capital of \$4,000,000, for the purpose of adding to and enlarging the entire plant to build TWENTY CARS A DAY. Everything that goes into the creation of a car, except the tin for the roof and the wire nails, will be created from Anniston's crude material by her labor and skill. Fifty tons of wheel iron will be made into car wheels daily, twenty tons into car axles, fifty tons of pig iron into car and other castings, and fifty tons into bar iron and bolts, making nearly ten thousand dollars per day added to the wealth of the country by profitable labor converting nature's capital to the use of man. This company have a capital of \$4,000,000, and their Anniston works will represent a cash outlay of \$1,000,000. One thousand skilled mechanics will be employed as soon as the great enlargements under way can be completed.

THE STEEL BLOOMARY

Consumes and increases the value of twenty tons of pig iron per day, while the Pipe Foundry converts to the use of man TWO HUNDRED TONS OF PIG IRON PER DAY in one of the largest and best planned and most convenient labor-saving works on this continent. The Foundry of Murray & Stevenson, Engine and Machine Works of Pinder & Co., and Boiler and Sheet Iron Works of J. & D. Noble, all add to the consumption of crude material by the creation of finished work.

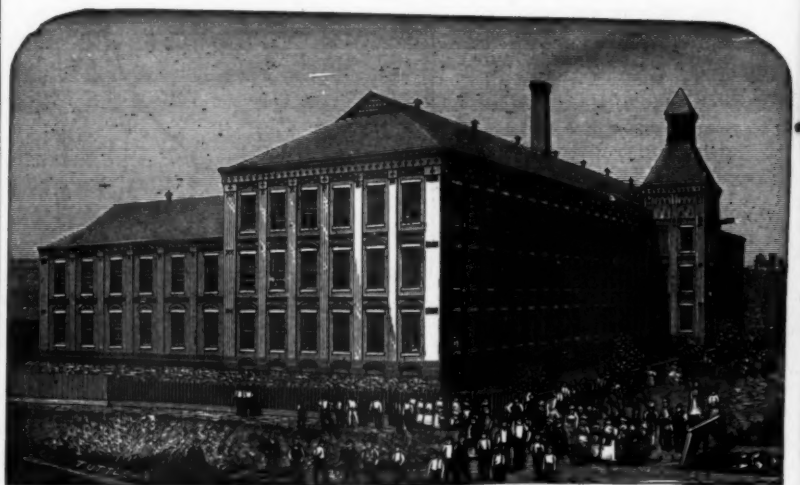
NOR IS IT TO IRON ALONE

That Anniston relies for increase of wealth and population. The Cotton Factory, with eleven thousand seven hundred spindles and three hundred and seventy-five looms, employing over three hundred and fifty operatives, adds greater value to the products of agriculture by converting six thousand bales of cotton into cotton cloth. The immense ninety-inch Morse Cotton Compress, with its brick warehouses, is fast making Anniston a cotton market and commercial center, and aiding its wholesale and retail merchants to extend and hold the trade of the country tributary to Anniston that its system of railroads has opened to them. The Georgia Pacific, the East Tennessee, Virginia & Georgia Railroad systems,

Give Direct Communication and Through Rates

To all parts of the country, while the Anniston & Atlantic Railroad, built by Anniston capital to open up new agricultural and mineral resources, gives Anniston, by connection with the Central of Georgia system, communication with the Atlantic sea coast and the new Anniston & Cincinnati Railroad, built and owned by Anniston citizens, opens up new resources and connections, and a shorter line with the great Northwest.

The proposed extension of the Anniston & Atlantic Railroad to Blocton will give another and shorter line to the great Cahaba Mines, producing the very best coal for domestic and manufacturing purposes in the South. Forty thousand acres of these coal lands, upon which a million and a half dollars have been lately spent in opening new mines and building several hundred coke ovens, ALL OWNED AND CONTROLLED BY ANNISTON CAPITAL, and developed to mine and manufacture three thousand tons of coal and coke per day, secures to Anniston for generations to come a full and certain supply of cheap fuel for all her industries, operated where a rich agricultural country can feed a manufacturing and commercial people, and where the



ALABAMA MANUFACTURING COMPANY'S COTTON MILL—ANNISTON.

Best, Healthiest and Most Invigorating Climate in the World,

With mountain air and pure water, and an elevation of nine hundred feet above tide water, insures the health and comfort of the workman and his family; where health and comfort stimulate and lighten labor, and secure to it and its industries the reward due to both. It is these advantages which have been given by nature that enabled Anniston's citizens to create her past and present prosperity, and which secure her future. It is that they may participate in and avail themselves of these advantages that Anniston invites NEW CAPITAL AND TALENT AND ENERGY from all sections. We invite all to come and see, and on the spot to judge for themselves of Anniston's great resources and possibilities. The comfort and quiet of the famous Anniston Inn will make a visit to our city a treat and pleasure. Any information, attention and courtesy will be given and shown by addressing or applying to the

ANNISTON CITY LAND CO., Anniston, Ala.

SHEFFIELD, ALA.

The Iron Manufacturing Center of the South.

At the head of navigation, on the Tennessee River, Sheffield is the **natural outlet** for the mineral and manufacturing products of Alabama and the neighboring States seeking a water route to points on the Ohio and Mississippi Rivers, and to the Gulf of Mexico, as well as the best **distributing point** over Alabama, Eastern Mississippi and East Tennessee, South Carolina, Georgia and Florida for Northern and Western produce, groceries, provisions, machinery, &c. Three Railroads already completed and in operation, and several others assured. **Principal shops of the Memphis & Charleston Railroad**, in which cars and locomotives are to be built, are under contract to be erected here. These will employ between **four hundred and five hundred mechanics**, and consequently, with their families, will make an increase in population of at least two thousand people. Shops of three other railroads are contracted to be located here, some of them being now under construction.

Five Completed Blast Furnaces,

HAVE A CAPACITY OF 700 TONS PIG IRON PER DAY.

Experts do not hesitate to say that iron can be manufactured more cheaply at Sheffield than at Birmingham, and its river transportation facilities will enable Sheffield iron to reach the principal markets at a saving of from

\$2.00 TO \$2.50 PER TON.

The quality of the Iron produced is pronounced by consumers to be the best from any furnaces in the South.

The following are among the Corporate and Private Enterprises belonging to Sheffield:

- | | | |
|--|---|--|
| 1 The Sheffield Land, Iron & Coal Company, capital \$1,000,000. | 14 The Sheffield Mineral Paint Company, \$50,000. | 35 Knowles Knitting Mill, \$30,000. |
| The Sheffield & Birmingham Coal, Iron & Railroad Company, capital \$7,500,000, owners and operators of three blast furnaces, the Sheffield, the Sheffield & Birmingham Railroad, coke ovens and coal mines near Sheffield. | 15 The Sheffield Agricultural Works, \$40,000. | 36 Sheffield Tapestry Works, \$40,000. |
| The Sheffield Furnace Company, capital \$150,000; assets \$500,000. | 16 The Sandstone Quarry Company. | 37 Robbins Machine Shop and Foundry, \$50,000. |
| The Lady Ensley Furnace Company, capital \$300,000. | 17 The Sheffield Cotton Compress Company, \$60,000. | 38 Sheffield Cotton Mill, No. 1, \$50,000. |
| 5 Enterprise Publishing Company, capital \$25,000; publishes daily paper with associated press report and weekly paper. | 18 Millar Brothers, Steam Laundry. | 39 Owen Pink Mixture Company, \$100,000. |
| 6 The Electric Light and Gas Fuel Works, \$25,000. | 19 Water Works, already expended \$30,000. | 40 Bell Telephone & Telegraph Company. |
| 7 The Sheffield Ice Company, capital \$25,000. | 20 Sheffield Street Railway Company, \$50,000. | 41 Fould's Shoe Factory, \$20,000. |
| 8 The Sheffield Manufacturing Company, \$30,000. | 21 Sheffield & Tusculum Street Railway Co., \$50,000. | 42 Enterprise Wood-working Company, \$30,000. |
| 9 The Sheffield Contracting Company, \$60,000. | 22 First National Bank, \$100,000. | 43 The Sheffield Harness & Saddlery Company, \$30,000. |
| 10 The Eureka Brick & Lumber Company, \$30,000. | 23 Cleveland Hotel Company, \$50,000. | 44 Principal Shops of the Sheffield & Birmingham R. R. |
| 11 The Sheffield Furniture Manufactory. | 24 Sheffield Hotel Company, \$120,000. | |
| 12 The Howard & Busch Brick Company. | 25 East Sheffield Land Company, \$300,000. | |
| 13 The Sheffield Bakery and Bottling Works. | 26 Hull & Keller's Fern Quarries. | |
| | 27 Vorhees' Galvanized Iron Cornice Factory. | |
| | 28 The Sheffield Quarries. | |
| | 29 Mobile Real Estate Company, \$50,000. | |
| | 30 Sheffield Real Estate Company, \$125,000. | |
| | 31 Sheffield & Mobile Improvement Company \$100,000. | |
| | 32 Sheffield Stove Works, \$50,000. | |
| | 33 Henderson Milling Company, \$100,000. | |
| | 34 Globe Iron & Brass Works, \$10,000. | |

Aside from the foregoing, the following are in course of construction and may be considered positive: Principal Shops of the Nashville, Florence & Sheffield Division of the Louisville & Nashville Railroad.

Reasonably certain to be secured in the near future are the following, in regard to which negotiations are pending: A Rolling Mill, a Large Machine Shop, a Cotton Mill, a Large Steel Plant.

GOOD WATER.

Free Public Schools and Churches

Drainage Excellent. Health and Climate Unsurpassed.

Splendid Opening for Men of Push and Energy.

No Better Point for Profitable Investment.

— NO "OLD FOGY" ELEMENT HERE. —

Sites for Manufacturing Enterprises,

AND FOR FREE PUBLIC SCHOOLS AND CHURCHES,

Donated by Sheffield Land, Iron & Coal Company.

WM. L. CHAMBERS, Vice-President and Manager,

SHEFFIELD LAND, IRON & COAL COMPANY, - - - SHEFFIELD, ALA.

Population January 1st, 1887, 700; August 21st, 1887, by actual count, 2,583. Increase of population, 300 per cent. in eight months, and only limited by accommodations. Present estimate (August, 1888) fully 3,500. Four years ago the site of Sheffield was cultivated as corn and cotton plantations, and was without a railroad. Numerous two and three story brick business houses, and one and two-story dwellings have been, and are being erected. The class of buildings will compare favorably with those in cities of 20,000 inhabitants. Limestone of excellent quality for fluxing iron in unlimited quantities at the furnaces' sites. First-class building stone and brick clay abundant. Rich and extensive deposits of Brown Hematite iron ore within twenty miles, along the lines of two Sheffield railroads, which, by actual results in the furnaces, yield above 50 per cent. metal. Iron of high grade is being made with a pound of coke to a pound of metal—a result never before accomplished with Southern ores and coke. The Sheffield & Birmingham Railroad runs through the heart of the Warrior Coal Fields, which abound in first-class Coking, Steam, Gas and Grate Coal. Timber is abundant and cheap. The Memphis & Charleston Railroad, Sheffield & Birmingham Railroad, and Nashville, Florence and Sheffield branch of the Louisville and Nashville Railroad are now in operation into Sheffield. Surveys of three other railroads have been recently completed to Sheffield, which will soon be the best combined river and railroad transportation center in the South. Every merchant and every established manufacturing enterprise is doing a profitable business. More are needed. For further information address

NEW DECATUR,

ALABAMA.

The New Industrial City of the Great Tennessee Valley.

DESCRIPTION OF ENTERPRISES ALREADY ESTABLISHED:

1. The United States Rolling Stock Company's Plant.

For full description see back numbers of the "Record"—June 1, 8, 15, 22, 29.

2. The Louisville & Nashville Railroad Company's Shops.

For full description see back numbers of the "Record"—July 6, 13, 20, 27; August 3, 10.

3. The Southern Horse Nail Company.

R. H. BALLINGER, President.....New Decatur, Ala.
W. W. LITTLEJOHN, (Cashier Nat'l Bank) Treasurer.....Decatur, Ala.
R. A. BALLINGER, Acting Secretary.....New Decatur, Ala.

J. A. BREWER, Agent.....Great Barrington, Mass.
EDWARD BAILEY, Agent.....903 Chestnut St., St. Louis, Mo.
JONAS TAYLOR, Agent.....Nashville, Tenn.

This company manufactures horse-shoe nails by a new and improved process, and of a greatly superior quality. Their plant has been in operation only a few months, yet has already turned out and sold 1,500 boxes of nails. It has 10 frames, of a combined capacity of about one ton per day. The buildings are situated on the Manufacturers' Switch-track, and are of brick and stone, of the most substantial and permanent character. The dimensions of the main building, which has a metal and truss roof, are 44x182 feet, and of the engine house 30x30. The company has already established a market for its product in New York and Massachusetts, south of the Ohio and west of the Mississippi, and after careful tests by experi-

enced smiths the nails have met everywhere with unqualified approval. The material used is the best Norway and Swedish product, the best soft steel in the world, imported for the purpose. The nails are hot forged, and it is claimed for them, and has been proved by ample tests: 1. That they are the best driving-nail made. 2. They will not split, bend or sliver, which is a frequent cause of lameness. 3. They are perfect in finish and shape, having well formed heads, fitting the shoe perfectly, and never growing loose by wear. 4. They are perfect in toughness and ductility, being hammered in forging similarly to the old fashioned hand-made nails.

4. The Decatur Iron Bridge & Construction Company.

This company was organized during the year 1887, and erected their plant during the summer and fall of that year, on an admirably-located tract of land covering about fourteen acres, fronting the Tennessee river. The buildings are connected by switch tracks with the Louisville & Nashville and the Memphis & Charleston Railroads, thus affording ample facilities for transportation by rail to and from all points North, South, East and West, and by water to and from all points on the Tennessee, Ohio and Mississippi Rivers. The machinery and all appliances are of the latest design, new and in perfect order, and ready for operation. The plant was operated successfully for several months, but the company was compelled to

suspend operations, simply and exclusively for want of capital, at a time when they had very large orders on hand, and were assured of permanent success. This plant, as described below, is now for sale, and can be purchased at a bargain. Manufacturers possessing sufficient capital and the necessary practical experience, can find no better or more profitable investment anywhere in the New South than this splendid plant, situated as it is in one of the very best locations in the country for that purpose. For further information apply to the First National Bank, Decatur, Ala., or to the Exchange Bank, New Decatur, Ala.

DESCRIPTION OF THE PROPERTY.

The property consists of about fourteen acres of land, a main building (of corrugated iron) 90x300 feet, and two "Ls" 60x75 feet each, in which is all the necessary machinery, new and in good order, for carrying on the business of bridge building and iron construction.

The real estate, independent of the improvements, has been valued by competent persons under oath at \$44,600, and the buildings, machinery and other improvements cost, according to the company's books, \$63,500, making in all a value of \$107,900.

In addition to the main building mentioned there is a brick pump house on the river bank, a stable and carriage shed, and a two-story frame office building 32 feet square, finely furnished, heated by steam, and provided with all necessary furniture and fixtures.

A side track from the Memphis & Charleston Railroad is laid alongside of the shops, convenient for loading and unloading material, and the tracks of the Louisville & Nashville Railroad also cross the property of the company. The cost of improvements is made up as follows, viz:

Buildings, grading and fencing.....	\$24,446 87
Furniture and fixtures.....	595 47
Machines, engines, boilers and pumps.....	18,115 52
Hand tools and iron templates.....	3,669 88
Shafting, pulleys and belts.....	6,616 25
Cranes and travelers.....	2,583 35
Furnaces and forges.....	647 13
Pipes (air, steam and water).....	615 55
Hammer dies.....	351 04
Tracks, cars and turn-tables.....	1,556 50
Platforms and skids.....	263 95
Scales.....	275 53
Electric-light plant.....	1,204 93
Anvils, formers and swedge blocks.....	342 43
Miscellaneous.....	1,998 16
Total cost.....	\$63,302 31

THE FOLLOWING IS A LIST OF THE PRINCIPAL TOOLS SET UP IN PLACE, VIZ:

One 60 Horse Power Engine, with boiler.
One Blakeslee Bolt and Rivet Header and Upsetting Machine.
One 36 in. x 36 in. x 9 ft. New Haven Planer.
One Hillis & Jones 6 in. Double Angle Shears.
One 1,100 lb. Single Stand Morgan Steam Hammer.
One No. 3 Hillis & Jones Single Punch, complete.
Two 30 in. x 8 ft. bed Rotary Planers, Leighton & Burck.
One Single No. 3 Long & Alstatter Punch, 13 in. d.
One Single No. 3 Long & Alstatter Punch, 6 in. d.
One Kellogg & Maurice Steam Riveter.
One Allen Air Riveter, with Steam Compressor and Air Receiver complete.

Two 36 in. Back Geared Feed Prentiss Drills.
One Wheel Feed Prentiss Drill Press, 16 in.
One Reid Engine Lathe, 16 in. x 8 ft. No. 77.
One Reid Engine Lathe, 16 in. x 6 ft. No. 95.
One 15 in. Heavy Shaper Tilt Table.
One Set Bending Rolls, 12 ft. clear.
One 3 1/2 Single, class A, Acme Bolt Cutter.
One No. 10 Bolt Cutter, complete. (Wells Bros. & Co.)
Two 8,000 pound Harrington Hoists.
One 6,000 pound Harrington Hoists.
One Westinghouse Electric Light Plant, 100 lights.

One Bullard Punch Grinding Lathe.
Two Emery Grinders.
One Wood Boring Machine.
One Circular Saw.
One No. 4 Sturtevant Mons. Blower.
One Dellamarter Steam Pump.

In addition to the larger tools above mentioned, there is a large assortment of small tools, consisting of Drills, Wrenches, Hammers, Sledges, Tongs, Shovels, Pinchers, Dies and Taps, Calipers, Files, Cutters, Heading Tools, Lathe Tools, Chucks, Vices, Planer and Shaper Tools, Screw Jacks, Anvils, Formers, Augers, Bits, Reamers, etc., etc.

For Maps, Pamphlets and other Information about New Decatur, address

The Decatur Land, Improvement & Furnace Company, New Decatur, Alabama.

DENISON, TEXAS.

The "Yankee" City of the Southwest,

— AND —

✱ GATEWAY ✱

— TO THE —

GREAT STATE OF TEXAS.

The City of Dennison presents the Finest Opportunity of any City in the Southwest for the Investment of Capital in Large or Small Sums.

DENISON is situated in Northeastern Texas near inexhaustible beds of coal and iron, surrounded by the finest fruit lands in the world, and adjoining the INDIAN TERRITORY, which, in the nature of things, must in a few years be opened to settlement.

The growth of Dennison has been a natural one, the city having reached its present size—16,800 population—in sixteen years.

The city is regularly and beautifully laid out. Railroads run from it in four different directions. The Missouri, Kansas & Texas alone does an enormous business, having 54 miles of switch track in Denison, employing 500 skilled workmen and disbursing \$150,000 a month in wages.

The first public school in the State was established here, and the city's elegant two and three story brick school buildings, surrounded by attractive grounds, are well arranged for the use of the white and colored children. Its schools are in session ten months in each year.

We have sixteen church societies, seven of which are colored.

The city is well supplied with pure water from its numerous private wells—dug in the ground—and its first-class system of water works, giving the citizens ample protection against serious loss by fire, and enabling the insurance companies to rate the city first class as to fire hazard. Rate of taxation low.

The city has four miles of street railway, with six miles now building to be operated by steam motor; has two electric light companies and a telephone plant. It has an influential New England colony, and counts among its citizens people from every State in the Union.

A large hotel, to cost \$125,000, is to be erected here this year, and a large steel plant with \$2,000,000 of capital is contemplated.

30,000 bales of cotton were shipped from Denison in 1888. 200,000 baskets of strawberries and several carloads of peaches and other fruits have been shipped to market this season.

The Denison Canning Co., capitalized at \$100,000, has just been organized, and ground has been broken for a large fruit and vegetable canning factory.

A cotton mill company is being formed with a capital of \$500,000. Denison citizens have subscribed \$150,000 to this enterprise; Eastern capitalists will add \$350,000.

The climate of Denison is magnificent, situated nearly 800 feet above sea level. In summer it is warm, but far cooler than many cities farther North, and from 6 P. M. until after sunrise it is always cool. The city is very healthy.

The capacity of the ice factory is being increased from a daily output of 15 tons to 30.

The Denison Land & Investment Co. is prepared to give every reasonable encouragement to manufacturers, and solicit correspondence from such manufacturers as contemplate coming into the Southwest to locate.

Address all communications to

THE DENISON LAND & INVESTMENT COMPANY, DENISON, TEXAS.

Paid-Up Capital, - - - - - \$1,200,000.

OFFICERS:

W. P. RICE, President.

MILTON H. FRENCH, Vice-President and General Manager.

ARTHUR L. BERRY, Secretary and Treasurer.

DIRECTORS:

W. P. RICE, Kansas City, Mo.
J. M. FORD, Kansas City, Mo.
A. R. COLLINS, Denison, Tex.

B. J. DERBY, Burlington, Vermont.
PAUL LANG, Oxford, N. H.
M. V. B. CHASE, Augusta, Maine.

MILTON H. FRENCH, Thomaston, Maine.
A. H. COFFIN, Denison, Texas.
JOS. B. LINCOLN, Boston, Mass.

LIBERTY, V.A.

The Most Beautiful Site on the Great
Norfolk & Western Railroad.

TWENTY-FIVE MILES WEST

Of Lynchburg, thirty miles east of Roanoke, and only nine hours from Baltimore. A town of 3,000 inhabitants, located in the heart of the beautiful Piedmont Section of Virginia, on the southeastern slope of the famous Peaks of Otter. Cool in summer, balmy in winter, healthful at all seasons, it offers advantages for homes unsurpassed in the United States.

THE TOWN IS ABUNDANTLY

Supplied with pure freestone water by a gravity system direct from the "Big Spring" between the two Peaks of Otter, and gives a pressure of 140 pounds to the square inch. The surrounding country is diversified with fertile, arable and grass lands and forests, is watered liberally by constant streams, and abounds in health-giving mineral springs—chalybeate, sulphur, magnesia, alum, etc.

SITUATED IN THE GATEWAY

Of the great southwest section of the State, no location offers more or greater advantages to prospectors than Liberty. To those in search of health it offers a record of 100 years without a single instance of an epidemic disease.

TO INVESTORS IT OFFERS

Lands at low prices in the most beautiful and prosperous section of the growing South. To those in search of locations for manu-

facturing enterprises it offers excellent transportation facilities, and within easy reach an abundant supply of cheap fuel and the raw materials of manufacture.

TO HOMESEEEKERS IT OFFERS

The best social, religious and educational advantages, with cheap and speedy access to the Eastern cities. Here, as the most eligible location in the State, has recently been located the preparatory department of the Randolph-Macon College, and handsome buildings are now in course of construction to accommodate a large number of pupils.

THE CHARACTER OF THESE

Buildings, which are unequalled in the Southern States for architectural beauty or adaptation to the requirements of a complete academic education according to the most approved modern standards, and the excellence of the management ensures to the public the best educational advantages.

IN CONSEQUENCE OF THE

Recent decided impetus to the demand for homes in Liberty, two improvement companies are engaged on the eastern and western suburbs of the town, laying out broad, handsome avenues and large, well-shaded building lots.

FOR FURTHER INFORMATION EITHER COME TO LIBERTY IN PERSON OR WRITE FOR FULL PARTICULARS, PLATS, &c., TO

J. LAWRENCE CAMPBELL,

SECRETARY LIBERTY IMPROVEMENT CO.

OR TO

R. KENNA CAMPBELL, Agent "Longwood Park."

200,000,000 TONS OF BROWN IRON ORE

IN SIGHT AT

BLUFFTON,

HIGH, HEALTHY AND HONEST.

GOOD PEOPLE AND GOOD WATER.

Cherokee County, Ala.

It is impossible to describe by words the enormous quantity of iron ore that is in sight on the land of this company. Said a prominent railroad man of the South: "I could not believe your statement as to the quantity, (200,000,000 tons in sight), but now that I have seen your ore deposits, I wonder how you put so low an estimate on them."

Prof. Robinson, of Bowdoin College, Brunswick, Maine, says: "I found at Bluffton iron ore in abundance, partly in solid cliff masses containing hundreds of thousands of tons, and partly in the form of gravel and small boulders lying in great banks similar in appearance to the gravel banks of New England. Whether there was as much of the gravel as of the bluff ore I could hardly judge, but it was very clear that the quantities of both were simply enormous."

G. S. Patterson, mining engineer, of Anniston, Ala., reports: "The amount of ore in sight was certainly beyond my expectation, though I was prepared to find a large deposit. The Bluff, as it is called, is a solid mass of ore on the side of a mountain, easily approachable, and can be mined cheaper than at any point in Alabama or Georgia, with which I am familiar."

Mr. Wm. H. Edmonds, of the Manufacturers' Record, says: "As to

the quantity of ore here, I don't suppose that all the furnaces in Alabama could use it up in a lifetime."—See Manufacturers' Record May 18, 1889, article entitled "BILL ARP AND BLUFFTON."

Ore can be delivered at furnaces built here at a cost not exceeding 50 cents per ton.

With high grade ores, analyzing over 50 per cent. metallic iron, delivered at the furnace at the above-named price, is there any possibility of such a place as Bluffton not being able to produce iron at figures which will yield a profit despite the duldest of dull times?

Prof. J. H. Pratt, of Birmingham, Ala., reports on samples selected from our property by Mr. Edmonds and Mr. G. S. Patterson as follows:

The sample of brown iron ore, marked "Bluff Ore," contains—	The sample marked "Gravel Ore" contains—
Metallic iron, - - 52.37 per cent.	Metallic iron, - - 53.23 per cent.
Phosphorus, - - - 0.782 "	Phosphorus, - - - 0.931 "
Silica, - - - - 14.60 "	Silica, - - - - 6.25 "
Water combined, - 8.10 "	Water combined, - 10.20 "
Moisture at 100° C - 2.50 "	Moisture at 100° C - 1.68 "

LARGEST DEPOSIT OF IRON

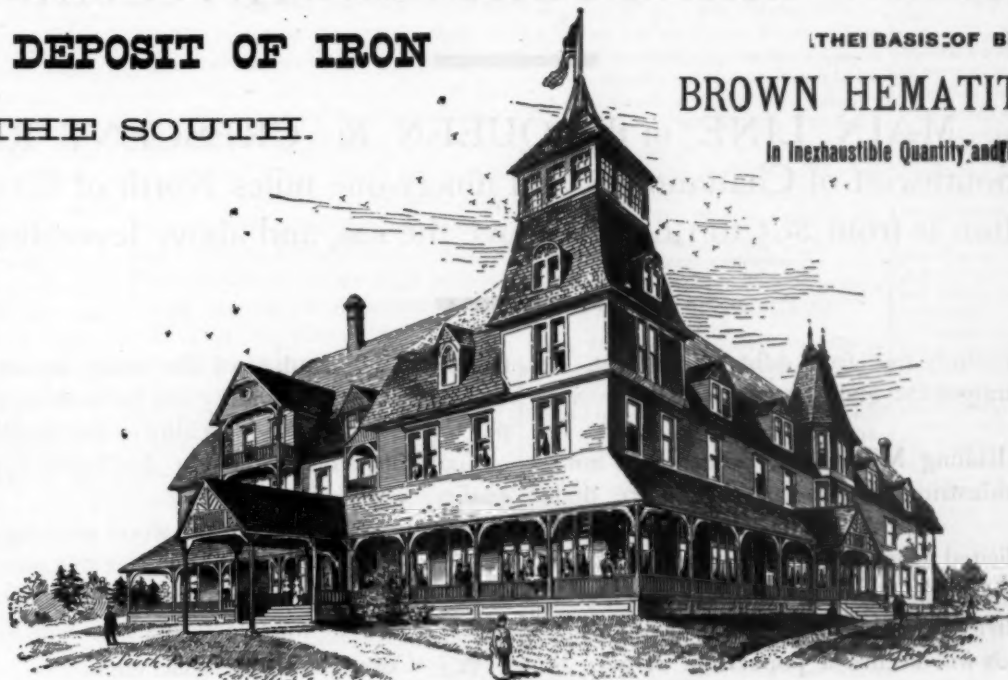
IN THE SOUTH.

[THE BASIS OF BLUFFTON:]

BROWN HEMATITE IRON ORE

In inexhaustible quantity and excellent quality.

Ore can be delivered at furnaces built here at a cost not exceeding 50 cents per ton.



THE SIGNAL—NOW OPEN AT BLUFFTON.

Located on the Selma Division of the East Tennessee, Virginia & Georgia Railway, midway between Rome and Anniston, and only two miles and three-fourths from the East & West Railroad, of Alabama.

A Dividend-Paying Stock Below Par. 8,000 Shares of Stock at \$14 Per Share—Par Value \$25.

PRICE OF STOCK:

The directors of the Bluffton Land, Ore & Furnace Co. have decided to offer to investors 8,000 shares (\$112,000) of its treasury stock for the purpose of building a 100 TON DAILY CAPACITY COKE IRON FURNACE at Bluffton, and for such other improvements and purchase of other unimproved real estate as may be considered by the directors for the best interests of the stockholders. This stock is now paying six per cent. from ore shipments, and for the past three weeks we have netted over \$20,000 from the sale of our city property—a sale which is larger by 20 per cent. than our estimate.

Only 8,000 shares will be sold at this price, \$14.00. As soon as this block is sold, which will probably be consummated inside of thirty days, the price will be advanced to \$20.00 per share. The balance left in the Treasury after this sale will probably not be offered less than par, if at all. Judging from present indications, it will not be necessary to sell more than the present block, as receipts from ore shipments and sales of real

estate will be ample to complete the furnace and make all improvements now contemplated.

Such a safe investment has never been offered—a dividend paying stock for less than par. Absolutely safe—cannot be assessed. Fully paid up in the organization. Work will be commenced on the furnace as soon as \$30,000 is subscribed on this sale. Persons desiring to purchase larger blocks than their present means will permit, can make a payment of one-half of the amount desired, the balance to be paid in thirty days. Blanks for subscription will be furnished from this office direct.

Orders will be filled in rotation for 1, 5, 10, 50, 100 or 1,000 shares till the entire block is sold. Positively only 8,000 shares will be sold at the above-named price. Subscriptions can be made direct to this office, or to any of the company's agents here or in New York, Chicago, Boston and Bangor, Maine. Remittances can be made by New York draft, express money order, or by currency by registered letter. We can furnish the highest testimonials in regard to this property from business men and experts who have visited it from all parts of the Union.

SEND FOR PROSPECTUS. ADDRESS

Bluffton Land, Ore & Furnace Company, Bluffton, Ala.

FORT PAYNE, Alabama.

★ COME TO ★

The NEW ENGLAND CITY of the South.

Climate Unsurpassed. Abundance of Pure Water. Drainage Excellent.

No Better Point in the Union
For Safe and Profitable Investment.

Situated on the MAIN LINE of the QUEEN & CRESCENT ROUTE, fifty-one miles Southwest of Chattanooga, and ninety-one miles North of Birmingham.

Elevation is from 895 to 1,600 ft above the sea, and above fever districts.

DeKalb County is entirely free from debt; taxes light.
Most liberal encouragement given to industries of every kind.

Iron Furnace and Rolling Mill will be constructed immediately, and other industries of various kinds are under contract.

Correspondence solicited from those who contemplate coming into the South to establish any kind of manufactories.

The different industries will employ at least two thousand skilled workmen, which will secure a population of over ten

thousand, independent of the many industries contemplated.

Iron of the best quality can be manufactured at as low cost per ton as in any other locality in the South.

Coal and iron are being developed rapidly of a superior quality.

Fine timber abundant and wood-working machinery of every kind can be profitably employed at this point.

The Company is prepared to give every reasonable encouragement to manufacturers who will locate at this point.

Correspondence solicited.

CAPITAL \$5,000,000.

OFFICERS.

President, - - - -	COL. J. W. SPAULDING
First Vice-President, -	HON. D. H. GOODELL
Second Vice-President, -	HON. HENRY B. PEIRCE
Secretary, - - - -	C. L. T. STEDMAN
Treasurer, - - - -	F. H. TOBEY
Manager, - - - -	C. O. GODFREY

BOARD OF DIRECTORS.

HON. D. H. GOODELL, of Goodell Mfg. Co., Antrim, N. H.
HON. HENRY B. PEIRCE, Secretary of State of Mass.
GEN'L SELDEN CONNOR, Ex. Gov. of Maine, Pres. Northern Banking Co., Portland, Maine.
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HORATIO ADAMS, Boston, Massachusetts.
W. J. CAMERON, Pres. First Nat'l Bank, Birmingham, Ala.
COL. JOHN B. BODDIE, Birmingham, Ala.
W. P. RICE, Pres. Union Investment Company of Kansas City, resides Fort Payne, Ala.

FORT PAYNE COAL & IRON COMPANY, Fort Payne, Ala.

Southern Railroads.

THE New York Herald quotes an old railroad authority as referring to Vice-president Smith, of the Louisville & Nashville, as not being—

"one of those officials who manage a railroad by 'holding down a chair' in the main office. He visits the towns along the route, gets himself in touch with the manufacturing and mercantile interests and is always ready to supply facilities for trade where they are needed. It was by pursuing this course that he was largely instrumental in building up the local traffic of the Louisville & Nashville Railroad, and in forwarding the interests of the many small mining towns along the route."

The South is very fortunate in the character of the men who are at the head of its big railroad interests. Mr. Smith's great work for the Louisville & Nashville has largely helped to bring that road to its present prosperity. Col. John M. Robinson, the president of the Seaboard & Roanoke Railroad, like Mr. Smith, operates his system for the good of the road and the good of the country tributary to it. Few men in this country have made a more enviable record in railroad management than Col. Robinson, whose roads are among the best dividend earners that can be found. Col. T. M. R. Talcott is a man of the same stamp. He works for the Richmond & Danville with the same conscientious devotion to its interests that he would give if he owned every dollar of its stock, and no better praise could be given. What Mr. Charles G. Eddy has accomplished for the Norfolk & Western Railroad and for Southwestern Virginia, pursuing as he does the same policy that has enabled Mr. Smith to do so much for the Louisville & Nashville, is well known to our readers. It is men of this character, active, progressive "developers" in its best and broadest sense, but not stock speculators or manipulators, that, fortunately for the South, control her leading railroads. The South can challenge the world on the character and ability of her railroad managers.

A VERY important extension is the new line just let to contract by the Sheffield, Birmingham & Tennessee River Railroad. The extension will be from Jasper to a point on the Georgia Pacific, 42 miles west of Birmingham, according to the Sheffield Enterprise. The work is to be finished in 90 days.

THE projectors of the Knoxville & Northeastern Railroad, which is to be built through a very rich mineral country, are Messrs. William Morrow, Nat. Baxter, Shook, Inman, Hillman and others, all noted financial and railroad operators, who are fully able to carry out this enterprise.

JOHN SCOTT & SON have the contract for 108 miles of the Mississippi Valley Railroad, from Vidalia, La., via Tallulah to Lake Providence.

An Important Railroad.

Since the article on "Texas Gulf Coast," in which some particulars of the great work that is being done at the mouth of the Brazos river, in building a deep water harbor, was put in type, we learn from an interview in the Texas papers with Mr. G. W. Angle, the general manager of the Brazos Dock & Channel Co., "that in thirty days the company will place in the field a corps of engineers to survey a line of railroad from the mouth of the Brazos direct to the coal and iron fields of Llano. The projected line will follow the west bank of the Brazos river for about fifteen miles north and then deflect to Wharton, where a branch will be run to Waco to connect there with the Gould and Cotton Belt system."

Readers of the MANUFACTURERS' RECORD will readily understand something of the great importance of such a railroad when constructed. At and around Llano are the wonderful stores of the highest grade of Bessemer ores, about which full particulars have lately been given in the MANUFACTURERS' RECORD. With a direct line from Llano to deep water at the new harbor which the Brazos Dock & Channel Co. are building, we believe that the shipments of Bessemer ores to Alabama and Northern furnaces would assume large proportions. It will be remembered that Mr. Geo. M. Wakefield, in his recent letter, referred to the possibility of this being done. In addition to the shipment of ores, this line would furnish transportation to deep water for the iron and steel that will eventually be produced at or near Llano, for the development of iron and steel interests there is inevitable.

THE remaining 47 miles of the extension of the Louisville & Nashville Railroad, from Middlesborough, Ky., or Cumberland Gap, to connect with the Norfolk & Western, was let a few days ago. Railroad construction in all that section is very active.

THE Craig Mineral Railroad, of Virginia, which the Chesapeake & Ohio Railroad has undertaken to build, will open up a very fine mineral and timber country heretofore inaccessible. Some active industrial developments will doubtless follow the construction of this line.

THE Evansville & Chattanooga Railroad Co. have secured \$325,000 in county subscriptions, and engineers will probably soon be at work running lines preparatory to active work. This road will furnish a direct line between Chattanooga and Evansville, Ind.

W. W. HAGEMANN, formerly consulting engineer of the Ohio Valley Railroad, has been appointed superintendent of the road.

Automatic Gate and Signal.

A New and Valuable Appliance for Railways.

The Carter Automatic Gate & Signal Co. has just been organized in this city to manufacture and sell a new and valuable appliance to add to the safety of railways. It is a simple, cheap, yet very practical affair. The much used gate-poles require the services of a gateman, while this automatic signal is controlled by the movement of the train. The plan is to have a sort of tower situated at the roadside at the railway crossing. When the train is a mile from the crossing the wheels work an automatic tripping arrangement which causes a flag or other signal to be displayed from the tower during the day and a light by night, and an electric bell is sounded until the train has passed, where it manipulates a retripper, which throws the signal back into position and silences the bell. For a much-used crossing a gate instead of a signal is worked automatically.

On a single track road this signal would be invaluable, for it can be stationed near sharp curves where trains coming from opposite directions cannot see each other. Many horrible accidents could have been prevented on single-track roads by the use of these signals. The system is conspicuous for the unusual simplicity of its mechanism. In addition to these virtues enumerated, it has another advantage in being very cheap. The company believes the signals can be erected for about \$100 apiece by the quantity. As the company is only just organized, no practical tests of the system have been made, but there seems to be no doubt as to its efficiency. Working models of it can be seen at the office of the company, 208 St. Paul street. In a few weeks the system will be introduced to railroad men in the West, and later it will be introduced in the South.

Improvements on the Chesapeake & Ohio Railway.

The Chesapeake & Ohio Railway is making a number of improvements in its track and is increasing its terminal facilities at Cincinnati. Last year 100 miles of 75-lb. rails were laid in the mountain divisions, and before the end of 1889 another 100 miles will be down. These rails are put in the place of the 62-lb. rail which was formerly the standard. The angle bars for the new rail are 44 inches long, there being three bolts in each rail end. The company is evidently preparing its road-bed for heavy traffic, and the road is well adapted for it. By the purchase of the Richmond & Alleghany Line from Richmond to Clifton Forge, via Lynchburg, they possess a line from Cincinnati through the Alleghany and Blue Ridge mountains to the Chesapeake, which has very moderate grades. The through freight, all of which now goes by way of Lynchburg, encounters a maximum grade of only 30 feet to the mile when east-bound, and these grades are not very long. In going westward, the heaviest grade is a short one of about 60 feet per mile. By the old freight route (via Charlottesville) the grades are heavier, especially for east-bound traffic. The through passenger traffic still goes by way of Charlottesville.—Railway Review.

STEEL RAILS.—There has been a livelier business in rails. An order for 10,000 tons for the Louisville, New Orleans & Texas Railroad has been placed at \$32.50@33, delivered at Cairo, Ill. Another for 5,000 tons for a Maryland railroad was reported, and several small orders involving about 5,000 tons, all told. There are still on the market orders for 20,000 to 25,000 tons. Eastern mill agents have secured \$28.50 at works for standard sections, and that is now a strictly "rock bottom price." Bids of \$28 have been refused. Some firms have put their figures up to \$29 at works.—New York Commercial Bulletin.

Railroad Construction

Albany, Ga.—Railroad.—A surveying corps will be sent out shortly under L. W. Roberts to locate the proposed Albany & Cordele Railroad.

Alvarado, Texas.—Street Railway.—The Alvarado Street Railway Co. will soon commence work on their street railway mentioned previously. Capital stock is \$10,000. Corporators are L. A. Patton, G. W. Cotton and others.

Anniston, Ala.—Dummy Line.—A stock company is being organized to build a dummy line from Anniston to Walker's Caves.

Augusta, Ga.—Dummy Railroad.—The Richmond County Belt Railway Co., reported last week to start work as soon as \$50,000 of stock are subscribed for, will build 10 miles of railroad.

Atlanta, Ga.—Railroads.—The bills previously mentioned as introduced in the legislature to incorporate the Melon Belt Railroad Co. to build from Quitman to some point on the Georgia Southern & Florida Railroad, and the Eatonton & Machen Railroad Co. have become laws.

Augusta, Ga.—Railroad.—The Augusta & West Florida Railroad Co., previously mentioned, have organized with C. E. Smith, of Washington, as president; A. P. Wright, Thomasville, vice-president, and C. Rhine, Augusta, secretary and treasurer. Road is to extend from Augusta to Thomasville. Surveys will soon be made.

Birmingham, Ala.—Dummy Line.—The Ensley Railway Co. are putting new rolling stock on their line, and have let contract for grading an extension to the fair grounds to Reed & Osborne. They also contemplate entering the city by another route.

Blue Lick Springs, Ky.—Railroad.—The Blue Lick Springs Co., reported in this issue as organized to rebuild the burned Arlington Hotel, will build a railroad from Blue Lick Springs to the Kentucky Central Railroad at Carlisle or Park's Ferry.

Blue Wing, N. C.—Railroad.—The Greensboro, Roxboro & Eastern Railroad Co. has been formed to build a road from Blue Wing to Greensboro. Thomas B. Keogh, of Greensboro, is interested.

Brooksville, Fla.—Railroad.—A bonus of \$30,000 has been offered the Palatka & Anclote Keys Railroad to build through Brooksville.

Brunswick, Ga.—Railroad.—The Altamaha Cypress Co., who are building a large saw and shingle mill, as stated lately, will build a railroad.

Cartersville, Ga.—Railroad.—The Georgia Mangane & Iron Co. will build a railroad from their property, to connect with the Western & Atlantic and East & West Railroads. Surveys are now being made.

Chattanooga, Tenn.—Electric Railway.—The Chattanooga & Northside Street Railway Co., previously reported as to build a street railway, will operate it by electricity, and have commenced work.

Chester, S. C.—The Camden, Chester & Gaffney City Railroad Co. will make a survey of the part of their proposed road between Chester and Gaffney City. J. N. Surratt, of Gaffney, is president.

Concord, N. C.—Electrical Railroad.—Mt. Pleasant has voted a subscription of \$24,000 towards grading the proposed electrical railroad from Concord to Mt. Pleasant, previously reported. John P. Allison can give information.

Crystal Springs, Miss.—Railroad.—Efforts are being made to have the Louisville, New Orleans & Texas Railroad Co. (office, Memphis, Tenn.) build a branch of their road to Crystal Springs.

Cumberland Gap, Tenn.—Railroad.—A railroad from Cumberland Gap to South Pittsburgh is projected.

Dahlonega, Ga.—Railroad.—A railroad is projected from Emerson to Dahlonega, and money has been raised to locate the line. R. H. Baker can give information.

Denison, Texas.—Electric Railway.—Contracts will be shortly signed for the construction of the Denison & Sherman Electric Railway, previously mentioned. The estimated cost is \$250,000.

Eden, Ga.—Railroad.—J. S. Horn, of Macon, has contract for furnishing cross-ties, and not for building part of the Savannah & Western Railroad, as lately mentioned.

Edgefield C. H., S. C.—Street Railway.—The construction of a street railway is talked of.

Elkhorn, W. Va.—Railroad.—The Norfolk & Western Railroad Co. (office, Roanoke, Va.) will extend road 3,000 feet at Elkhorn.

Eureka Springs, Ark.—Dummy Railroad.—A dummy railroad is projected.

Frederick, Md.—Railroad.—A railroad from Frederick to Washington, D. C., is projected.

Gadsden, Ala.—Railroad.—The Chattanooga, Gadsden & Birmingham Railroad Co., lately reported as organized to build a road from Leeds via Gadsden to the Tennessee State line, have surveys completed. Engineer, in a report, states that road is practicable, of easy grade, and can be built cheap.

Gainesville, Ga.—Railroad.—It is reported that work on the Gainesville & Dahlonega Railroad will be resumed and pushed to completion.

Galveston, Texas.—Railroad.—The San Antonio

& Aransas Pass Railroad Co. (office, San Antonio) are enlarging their terminal facilities.

Georgetown, Ky.—Street Railway.—The Georgetown Street Railway Co., previously reported as organized to build a street railway, have been granted a franchise.

Greenwood, Miss.—Railroad.—The Louisville, New Orleans & Texas Railroad Co. (office, Memphis, Tenn.) will build a branch road from Lula to Greenwood, and are making surveys. It is intended to build from Greenwood to Vicksburg also sometime next year.

Griffin, Ga.—Street Railway.—J. G. Rhea, Robert T. Daniel, Henry C. Burr, W. E. Drewry and others will build a street railroad about three miles long. They have charter granted at last session of legislature.

Hamilton, Va.—Railroad.—Frank Hitch, president Hamilton Railroad & Lumber Co., is individually building the branch to Kill Quick, mentioned last week, distance 8 miles. 30-lb. rail is being used. Rolling stock of the company will be used.

Harper's Ferry, W. Va.—Railroad.—The Baltimore & Ohio Railroad Co. (office, Baltimore, Md.) will move their tracks further away from the banks of the Potomac river, and will build a new bridge across the Potomac river at a later date.

Henrietta, Texas.—Railroad.—The report last week that the Missouri, Kansas & Texas Railroad Co. (office, St. Louis, Mo.) will build beyond Henrietta into New Mexico is not confirmed.

Houston, Texas.—Railroad.—The San Antonio & Aransas Pass Railroad Co. (office, San Antonio) have sent out a surveying corps to locate their road from Houston to Alexandria, La., mentioned in last issue.

Humboldt, Tenn.—Street Railway.—The Humboldt Street Railroad Co., reported last week as chartered with \$10,000 capital stock, will build one mile of road at once. It will be extended later.

Irvine, Ky.—Bridge.—The bridge reported last week as to be built across the Kentucky river near Irvine by the Richmond, Nicholasville, Irvine & Beattyville Railroad Co. (office, Nicholasville), will be 1,250 feet long. Channel span is to be 250 feet long, and flanking spans 200 feet. No designs further than these have been made.

Jasper, Ala.—Railroad.—The contract for testing on the extension of the Sheffield & Birmingham Railroad to a point on the Georgia Pacific Railroad, 26 miles, reported last week, has been let to Ford & Musgrove. Road is to be completed in 90 days.

Knoxville, Tenn.—Electrical Railroad.—It is reported, but not confirmed, that the Park Street Dummy Line will be changed to electric power.

Knoxville, Tenn.—Electric Railway.—The Knoxville Street Railway, previously mentioned as to change to electric power, will shortly let contract for machinery and equipment. New and heavier rails will be laid on Gay street. A building for their plant has been purchased.

Knoxville, Tenn.—Railroad.—Knox county has voted a subscription of \$100,000 to the Knoxville & Northeastern Railroad, previously reported, which insures the early commencement of construction. It will extend to the North Carolina State line, and will be, with branches, about 60 miles long.

Lane's, S. C.—Railroad.—The Georgetown & Western Railroad Co. (office, Georgetown) will apply at next session of the legislature for an amendment to their charter authorizing an extension from Lane's to some point on the Eutawville Railroad in Clarendon county.

Lexington, Ky.—Electric Railway.—The Lexington City Railway Co. have decided to change their street railway to an electric road, previously reported.

Madison, Fla.—Railroad.—The Ocean Pond Investment Co., of Valdosta, Ga., will probably make arrangements with the Tobacco Belt Railroad Co. to secure the extension of their proposed road from Madison to the Gulf coast, north to Valdosta.

Marksville, Va.—Railroad.—The Eureka Mangane Co. contemplate building a short line of railroad.

Maxton, N. C.—Railroad.—It is reported that a syndicate of capitalists have purchased from the Cape Fear & Yadkin Valley Railroad Co. (office, Fayetteville) the charter of that part of the old Fayetteville & Florence Road extending from Maxton to the Pee Dee river, about 40 miles, 12 miles of which are graded, and will build at once.

Memphis, Tenn.—Railroad.—The Memphis, Arkansas & Texas Railroad Co., reported about two years ago as incorporated to build a road from Memphis via Marianna, Ark., to some point in Texas, have organized with George Arnold as president; Holmes Cummins, vice-president; George Gilham, secretary; C. W. Shultz, treasurer, and T. G. Dahney, chief engineer. Work on west side of Mississippi river has been started. The De Soto & Levee Construction Co., contractor for the first 10 miles, have sublet contract for first five miles to Vance & Franklin.

Middlebourne, W. Va.—Railroad.—Tyler county has voted to subscribe \$27,000 to the stock of any

company who will build a railroad through that county in the next two years.

Moss Point, Miss.—Tramway.—The Pascagoula Lumber Co. have rebuilt and extended their tramway.

Nashville, Tenn.—Electrical Railroad.—The McGavock & Mt. Vernon Street Railroad Co., previously mentioned as to change to electric power, have let contract for outfit for plant. Work will be pushed.

New Decatur, Ala.—Railroad.—The Mobile & Ohio Railroad Co. (office, Mobile) contemplate building a road from Aberdeen, Miss., to New Decatur, and are making surveys.

Nona, Texas.—Tramroad.—A. Hutchins expects to build a tramroad soon. Has saw mill.

Owensboro, Ky.—Dummy Line.—The Owensboro City Railway Co. are building a dummy line to the fair grounds.

Oxford, N. C.—Railroad.—A railroad will probably be built from Oxford to the Durham & Northern Railroad, about three miles.

Pineville, Ky.—Railroad.—The Louisville & Nashville Railroad Co. (office, Louisville) have let the contract for the remaining 47 miles of their Cumberland Valley extension, previously reported, to Winston Bros., of St. Paul, Minn.; Upper & O'Connor, of Cleveland; Henry Davin, of Lexington, Va., and Mason, Hoge & Co., of Frankfort. Mileage has not been assigned.

Rogersville, Tenn.—John Hasson & Co. have the contract to grade 4 miles and build one bridge on the Charleston, Cincinnati & Chicago Railroad, previously mentioned.

Salisbury, N. C.—Railroad.—Rowan county has voted a subscription to the Cape Fear & Yadkin Valley Railroad.

Stevenson, Ala.—Railroad.—It is reported that the Memphis & Charleston Railroad Co. (office, Memphis, Tenn.) have let the contract to extend their road from Stevenson to Chattanooga, Tenn., to McDonald, Shea & Co., of Knoxville, Tenn.

Velasco, Texas.—Railroad.—G. W. Angle, general manager the Brazos Dock & Channel Co. states that they will shortly commence surveying for a railroad from the mouth of the Brazos river, where they are building a deep water harbor, as previously reported, to Llano and Waco.

Vicksburg, Miss.—Tramway.—The Vicksburg Wharf & Land Co. are building a tramway.

Vidalia, La.—Railroad.—John Scott & Son will soon start work on their contract to build the Mississippi Valley Railroad, previously mentioned, from Vidalia via Tallulah to Lake Providence, 108 miles. They have contract for all work.

Winchester, Ky.—Railroad.—Rinehart, Clark & Locker have received a contract to build several miles of the Kentucky Union Railroad in Lee county.

Yazoo City, Miss.—Railroad.—It is reported that an Eastern syndicate will build the Yazoo Delta Central Railroad, mentioned last week.

Yazoo City, Miss.—Railroad.—G. W. Faison, of Faison, interested in the Valley Central Railroad Co., chartered at last session of legislature to build a road from Yazoo City to Helena, Ark., 100 miles, and from Yazoo City to Vicksburg, 40 miles, states that a corps of engineers will be sent out during this fall.

CARY, BROS. & Co. and others, of St. Louis, have received contract for 71 miles of the Fort Scott, Natchez & Gulf Railroad, between Vidalia, La., and Rayville, and are under bond to complete it by May 1, 1890.

THE CHATTANOOGA RAILROAD TO BE EXTENDED.—ASHLAND, KY., Sept. 14, 1889.—The Ohio & Big Sandy is the reorganization of the Chattahoochee, and will doubtless be pushed through at an early date to a connection with the roads beyond the Cumberland range of mountains. Should the road go via Pocahontas, which is probable, it would leave the present line at Louisa, the mouth of the Tug, instead of Richardson.

JAY H. NORTHRUP, Supt.

ELECTRICAL RAILROAD AT NASHVILLE.—NASHVILLE, TENN., Sept. 12, 1889.—I have recently purchased about two-thirds of the stock of the Edgefield & Nashville, (all lines over there on east side), and will use electric power and equip same before January 1.

W. MORROW.

CONSTANTLY ENLARGING WORKS.—BIRMINGHAM, ALA., Sept. 12, 1889.—We are improving and increasing our works almost monthly to meet the demand made on us by increase of business. Our weekly pay-roll one year ago was \$90; it has grown to \$1,000 per week.

BIRMINGHAM RAILWAY SUPPLY CO.

STREET RAILROAD TO BE EXTENDED.—PARKERSBURG, W. VA., Sept. 14, 1889.—The Park City Street Railway Co.'s road now extends from 7th street to City Park, two miles. Seven cars. Will extend at once to depots and lower part of city, making three miles.

S. F. SHAW, Supt.

Southern Financial News.

NEW BANKS.

Birmingham, Ala.—J. P. Mudd and others have organized a savings bank with \$50,000 capital. Operations will be started about October 1.

Blackville, S. C.—The Merchants and Planters' Bank, capital \$25,000, has been chartered by P. W. Farrell, D. H. Salley, J. H. Riley and others.

Centre, Ala.—Parties are contemplating starting a bank.

Chattanooga, Tenn.—The Citizens' Bank & Trust Co. has been organized with G. N. Henson as president; C. E. Buek and M. P. Mason, vice-presidents, and R. M. Chambliss, cashier. Paid-in capital will be about \$100,000. This is the same as the bank previously recorded as to be started under the name of the Bank of Commerce.

Dawson, Ga.—The name of the \$50,000 bank previously mentioned as to be started with A. J. Carver as president is the Dawson National Bank. Business has been commenced.

Dayton, Tenn.—The Rhea County Bank has been organized and will soon start business with \$50,000 capital. It will have a savings department. R. N. Gillespie, H. T. Blevins, A. A. Crabs and others are interested.

Frostburg, Md.—The Citizens' Bank (national) has been formed by W. R. Parcy, Owen Hitchens and others. Capital will be \$50,000.

Greenwood, S. C.—The Bank of Greenwood has lately declared an 8 per cent. dividend, and holds about same amount as surplus. Bank started September 15th last year.

Honey Grove, Texas.—The Planters' National Bank has commenced business with capital of \$75,000.

Lebanon, Tenn.—The Second National Bank has changed to a State bank and will be known as the People's Bank. Capital is \$50,000.

Louisville, Ky.—H. O. Gray, Thomas James, S. R. James, H. Lee Suter and others have incorporated the Union Savings & Investment Co., capital \$300,000.

Montgomery, Ala.—The Farmers' Alliance contemplate starting a bank.

Orange, Texas.—The First National Bank has been organized and commenced business. Capital is \$50,000.

Oxford, Miss.—The Merchants and Farmers' Bank, capital \$100,000, has been organized with William A. West as cashier. Operations have been started.

Pratt Mines, Ala.—A bank is to be started.

Sheffield, Ala.—The name of the mortgage and investment company previously reported as organized by New England capitalists is the Sheffield Loan & Investment Co., capital stock \$100,000.

Shreveport, La.—The name of the bank reported last week as to be started will be the Merchants and Farmers' Bank. Capital paid up is \$200,000. Peter Youree is president, and W. P. Ford, cashier.

Smithville, Ga.—A bank is reported to be started.

St. Matthew's, S. C.—The St. Matthew's Savings Bank will meet in October to increase capital from \$15,000 to \$25,000.

Washington, D. C.—Parties will probably organize a bank to be located west of Fifteenth street and north of Eighteenth street.

Wichita Fall, Texas.—There is talk of starting a bank.

Liberty, Va., will issue 20 \$500 bonds for enlarging water works, &c. They are payable on October 1, 1923, and redeemable after October 1, 1899.

Foreign Exchange Quotations.

ALEXANDER BROWN & SONS.

BALTIMORE, September 18, 1889.

Sterling.—		
60 days.....	48 1/2	Commercial..48 3/4@48 3/4
3 days.....	48 3/4	
France.—		
60 days.....	51 1/2	Commercial..52 1/4
3 days.....	51 1/4	
Reichmarks.—		
Commercial.....	94 1/2@94 1/2	
Gulders.—		
Commercial.....	39 1/2	

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Investment and Miscellaneous Securities a specialty, and large lines handled. Exceptional facilities for dealing in all classes of Southern Bonds. Loans on Collateral Securities negotiated. Quotations and information furnished on application, and correspondence invited.

J. WM. MIDDENDORF. Memb. Baltimore Stock Exchange. WM. B. OLIVER.

MIDDENDORF, OLIVER & CO.

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JOHN L. WILLIAMS & SON, BANKERS,

RICHMOND, VA.

Our MANUAL OF INVESTMENTS, the largest publication of the kind published by any banking house in the United States, may be had upon application by parties interested.

Richmond Stock Exchange Quotations.

Reported by JOHN L. WILLIAMS & SON, Bankers, Richmond.

RICHMOND, VA., Sept. 17, 1889.

	BID.	ASKED.
North Carolina 4's, 1910	95 1/2	97 1/2
North Carolina 6's, 1919	126 1/2	128
Virginia New 3's, 1932	67 1/2	67 1/2
Lynchburg, Va., 5's, 1915	103	103
Petersburg, Va., 5's, 1918	103 1/2	104
Norfolk, Va., 5's, 1911	104	104
Richmond, Va., 5's, 1922	113	113
Atlanta & Charlotte Ry., 1st 7's, 1907	119	121
Atlanta & Charlotte Ry., 2d 6's, 1907	105	105
Char., Col. & Aug. R.R. Gen. 6's, 1932	108	108
Georgia Pacific Ry., 1st 6's, 1922	113	113
Georgia Pacific 2d 5's, 1923	84	86
Ga. Pacific Income, 5's	31	32
Petersburg Railroad Class A 5's, 1926	107	107
Petersburg Railroad Class B 6's, 1926	107 1/2	108
Rich. & Danville R. R. Gold 6's, 1915	116	116
West. N. Car. R. R. Gen. 6's, 1914	93	95
Northwestern N. Car. R. R. 1st 6's	103 1/2	103
Atlanta & Charlotte R. R. Stock	88 1/2	90
North Carolina Railroad Stock	104	107
R. F. & Pot. R. R. Div'd Obligations	111 1/2	112 1/2
Virginia Midland Railway Stock	32	37
Sloss Iron & Steel Co. Stock	41 1/2	41
Sloss Iron & Steel Co. 1st 6's	90	92
Sloss Iron & Steel Co. 2d 6's	63 1/2	65

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Financial Agents of the United States Government in England.

Baltimore Stock Exchange Quotations.

Reported by ALEXANDER BROWN & SONS, Bankers, Baltimore.

BALTIMORE, Sept. 18, 1889.

	BID.	ASKED.
Virginia 3-4's 10-40's	36	36
Virginia 3's, new	67 1/2	67 1/2
Virginia Consul Coupons, N. F.	18 1/2	20
Virginia 10-40 Coupons, N. F.	27	27
N. Carolina 4's	76 1/2	76 1/2
Norfolk Water 8's, C.	102 1/2	103
Ga. 4 ar. & N. 5's	102 1/2	102 1/2
Va. & Tenn. 2d 5's	107	107
Wil. Col. & Aug. 6's	118 1/2	118 1/2
Atlanta & Char. 1st 7's	121	121
Col. & Green. 1st 6's	104 1/4	104 1/4
Col. & Green. 2d 6's	86 1/2	87
Va. Midland, 1st 6's	120	120
Va. Midland, 2d 5's	110	110
Va. Midland Income 6's	86 1/2	86 1/2
Char., C. & Aug. 1st 7's	110 1/2	110 1/2
Char., C. & Aug. 2d 7's	121	121
West Va. Central 1st 6's	108	108 1/2
Ga. Pacific 1st 6's	113	113
Ga. Pacific 2d	86 1/4	87
Cape Fear & Y. Valley 6's, A	104 1/2	105
Cape Fear & Y. Valley 6's, B	103	103 1/2

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

*Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

†In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Alexandria—Ginney.—The Farmers' Alliance Manufacturing Co., lately mentioned as to increase capital stock, are erecting a 40 horse-power cotton ginney.

Anniston—Rolling Mill.—The United States Rolling Stock Co. will put a new engine and new rolls in their rolling mill.

Birmingham—Steel Plant.—The Henderson Steel Co., who are building a steel plant, as previously reported, will issue \$50,000 of bonds to build a blooming train and for working capital.

Birmingham—Electric-light Plant.—The Merchants' Electric Light & Power Co. will meet September 24 to consider the issuance of from \$5,000 to \$10,000 of bonds, probably for improvements.

Birmingham—Sewerage System.—Andrews & Connell have received contract to build the Morris avenue sewer, lately mentioned, at \$10,692.

Birmingham—Rolling Mill.—The Birmingham Rolling Mills are making arrangements to use gas as a fuel in their furnaces. They will also erect a carpenter shop.

Birmingham—Novelty Works.—A. J. Carr, of Wilkesbarre, Pa., is endeavoring to organize a stock company to manufacture his patent novelties.

Birmingham—Gas Works.—A new company will probably be organized to purchase the Birmingham Gas Works, which are to be sold at public auction.

Broken Arrow—Coke Ovens.—W. P. Laramore, of Cartersville, Ga., mentioned in last issue as with others to develop a coal mine 4 miles from Broken Arrow, will build coke ovens.*

Childersburg—Planing Mill.—W. D. Wallis has erected a planing mill in addition to the cotton gin reported last week.

Clarke County—Saw Mill.—Taylor & Co., of Mobile, have bought a tract of yellow pine land and will build a saw mill.

Decatur—Iron Furnace.—An Eastern syndicate is about to close negotiations for the lease of the Decatur Land & Improvement Co.'s charcoal iron furnace. It may be started up as a coke furnace.

Ensley—Car Works.—The Tennessee Coal, Iron & Railroad Co. will erect car works, foundry and machine shop to cost \$60,000. This is probably a removal of the Linn Iron Works from Birmingham.

Eufaula—Ice Factory.—The Eufaula Oil & Fertilizer Co. will add by next summer an ice factory to their cotton-seed oil mill and fertilizer factory just completed.

Eufaula—Water Works.—The Eufaula Water Co., reported last week as purchased by A. M. Baldwin, of Montgomery, will probably change water supply to artesian wells. R. H. Walker is superintendent.*

Florence—Cordage Factory.—A \$50,000 stock company has been organized by Boston parties to establish a cordage factory. Major J. H. Field, Florence, can give information.

Florence.—It is reported that a new industry, possibly a cotton mill, capitalized at \$1,000,000, will be established. Major J. H. Field, Florence, can give information if correct.

Gadsden—Furniture Factory.—Col. R. B. Kyle is establishing a furniture factory.

Huntsville—Telephone Line.—George A. Lipincott and others, reported in last issue as to

build a telephone line from Huntsville to Gunterville via Brownsboro and other towns, have incorporated the Alabama, Mississippi & Tennessee Telephone Co. with a capital stock of \$50,000.

Mobile—Saw Mill.—The Bay City Lumber Co., of Bay City, Mich., have purchased the saw mill of Henderson, Lossing & Co., mentioned in last issue, and will increase the capacity to 75 M feet daily.

New Decatur—Furniture Factory.—The factory of W. C. Robinson, reported last week as to be moved from Lyons, N. Y., to New Decatur, is a furniture factory. He wants to form a stock company.

Omega—Gin.—H. Blue & Co., of Union Springs, have erected a cotton gin.

Sheffield—Brick Works.—The Sheffield Contracting Co. have increased the capacity of their brick works.

Troy—Water Works.—The franchise granted J. Walker Bates to build water works will expire on the 1st of October, and the city will probably soon contract with other parties for the construction of water works. The mayor can give information.

Uniontown—Gin.—B. F. Harwood has added a cotton gin to his oil mill.

ARKANSAS.

Aplin—Saw Mill.—A saw mill has been erected by Asa Wright.

Aplin—Gin.—E. L. Dooley and G. W. Dalton are erecting a cotton gin.

Charleston—Flour Mill.—W. L. Kelleam has put some new machinery in his flour mill.

Dixie—Gin.—H. L. Trundle is building a cotton gin.

England—Furniture Factory.—There is talk of starting a furniture factory.

Fort Smith—Elevator.—The Fort Smith Oil & Compress Co. are putting in a cotton elevator.

Fort Smith—Gin.—John Matthews has erected a new ginney.

Greenway—Saw Mill and Stave Factory.—D. H. Hamot, lately mentioned as to probably build several saw mills, will erect a saw mill and stave factory 3 miles from Greenway. He will employ about 150 men.

Hardy—Grist Mill, &c.—A grist mill and cotton gin has been erected.

Helena—Soap Factory.—Webb & Akin will start a soap factory.

Little Rock—Brick Works.—The Clark Press Brick Co. has been incorporated with Charles W. Clark, president, and T. T. Johnson, secretary and treasurer, for the manufacture of pressed brick. The capital stock is \$25,000.

Jasper—Zinc Mine.—W. S. Allen and associates are developing a zinc mine 5 miles from Jasper.

Little Rock—Oil Mill.—The Southern Cotton Oil Co., lately mentioned as repairing their mill, are putting in new machinery also.

Little Rock—Gin.—John D. Adams has purchased machinery to erect a cotton gin.

Little Rock—Granite Quarries.—The name of the company lately reported as organized to develop granite quarries is the Fourche Mountain Granite Co. Capital stock is \$100,000. Work will be started at once. E. J. Payn is president; J. A. Bowman, vice-president, and R. B. Howser, secretary and treasurer.

Malvern—Brick-yard.—A brick-yard will be started, it is reported.

Pocahontas—Grist Mill, &c.—J. Schoonover is rebuilding his grist mill and cotton gin previously reported as burned.

Portia—Gin.—T. Cochran has erected a cotton gin.

Prairie Grove—Flour Mill.—Catlett, Cummins & Hall have bought the Prairie Grove flour mills and will put in roller machinery.

Rhea Mills—Flour Mill.—J. H. McShay & Co. will put in operation the Rhea Mills flour mill, which has been idle for a long time. Roller machinery will be put in next spring.

Russellville—Coal Mine.—A coal mine is being opened on the land of Mrs. S. M. Perry by Mr. Carpenter.

Water Valley—Grist Mill, &c.—A grist mill and cotton gin will be built.

Woodlawn—Mill, &c.—The grist mill and cotton gin of Mr. Tribble is being improved.

Yellville—Zinc Mine.—A zinc mine has been opened by Nat Estes.

FLORIDA.

Fernandina—Fibre Factory.—The addition to the plant of the Loomis Manufacturing Co., reported last week, will be three stories, 40x120 feet, and not 25x50 feet.

Fort Brook—Saw Mill.—Thomas Clark will erect a saw mill.

Hart's Road—Rice and Corn Mills.—W. W. Farmer will erect a rice mill and a corn mill.*

Ocala—Mattress Factory.—J. M. Boynton is thinking of starting a mattress factory.

Ocala—Wine Factory.—Serge Malyanov will, it is reported, start the manufacture of wine.

Pensacola—Wharf.—The Central Wharf Co. will shortly commence work on a wharf to be 1,000 feet long.

Sanford—Saw Mill.—E. H. Herndon is moving his saw mill to another location and is probably making improvements.

St. Augustine—Saw Mill.—L. J. Wallace, C. F. Price and G. Sedding have purchased and will operate a saw mill at Middleton, 13 miles from St. Augustine.

Tallahassee—Foundry and Machine Shop.—A foundry and machine shop is proposed.

Tampa—Electric-light Plant.—The Tampa Electric Light & Power Co. will enlarge their plant if given a contract to light the city.

GEORGIA.

Americus—Talc Mine.—A bed of talc has been discovered and will, it is reported, be developed.

Athens—Gas Works and Electric-light Plant.—W. A. Robinson, of Atlanta, has purchased the works of the Athens Gas Co., mentioned last week as contracting to furnish the city with electric lights and to erect a plant. Mr. Robinson will carry out the contract and erect the plant.

Athens—Cotton Mill.—The Athens Manufacturing Co. will resume operations at their cotton mill September 23.

Atlanta.—W. E. Simmons, T. P. Stavall and H. D. Falkner have incorporated the Union Real Estate Trust Co. The capital stock will be \$100,000.

Atlanta—Gold Mine.—The Atlanta Gold Mining Co. are preparing to develop their gold mine.

Brunswick—Rice Mill.—A rice mill is talked of. C. M. Tilton can give particulars if anything is done.

Brunswick—Terra-cotta Works, &c.—The Brunswick Terra Cotta & Artificial Stone Co. will be chartered by William Huber, J. H. Daniel and others to establish the jug factory lately mentioned, and terra-cotta and artificial stone works.

Brunswick—Docks.—The South Brunswick Terminal Railroad Co. will extend their docks 1,000 feet, and have started work.

Brunswick—Electric-light Plant.—The Brunswick Electric Light Co. have moved their plant to another site and enlarged it.

Cartersville—Ore Washers.—The Etowah Iron Co., reported last week as to develop iron and manganese mines on the Etowah property, will erect improved ore washers at once. Their capital stock will be \$1,000,000.

Cordele—Railroad Shops.—Inducements are being offered the Savannah, Americus & Montgomery Railroad Co. (office, Americus) to have them move their shops from Americus to Cordele.

Dahlonega—Gold Mine.—W. N. Horner, of Belleville, Ill., will probably lease and develop a gold mine.

Gilmer County—Timber Lands.—J. I. Stanton and others, of Painted Post, N. Y., have purchased through W. M. Scott & Co., of Atlanta, 30,000 acres of timber lands in Gilmer, Fannin and Murray counties for \$40,000, and will, it is said, develop.

Girard—Gin.—A cotton gin is being erected.

Louisville—Ginney.—R. P. Little, reported last week as building a cotton ginney, is agent for the Southern Cotton Oil Co. A fertilizer factory may be added next spring.

Marietta—Cotton Factory.—A cotton factory will probably be built on the co-operative plan.

Marietta—Bridge.—J. M. Stone will receive bids until October 11 for building a 75-foot bridge of all heart pine across Wilcox creek.

Milledgeville—Spoke and Hub Factory.—C. W. Ennis contemplates starting the manufacture of spokes and hubs.*

Mineral Bluff—Marble Quarries.—J. A. Dewar, of Nelson, will shortly resume operations at his marble quarries.

Perry—Variety Works.—The Perry Variety Works have doubled their power.

Rome—Electric-light Plant.—The Rome Rolling Mills have put in an electric-light plant.

Rome—Electric Lighting.—The Rome Gas Co. has contracted to light the city by electricity at \$3.50 per year, furnishing 22 arc lights and 37 series of incandescent lights.

Savannah—Cotton Mill.—The Savannah Cotton Mills Co., previously reported as to rebuild their burned cotton-mill, have \$35,000 of the \$100,000 capital stock subscribed, and expect to begin work about October 1.

Weston—Gin.—The Farmers' Alliance have erected a cotton gin.

KENTUCKY.

Brandenburg—Gas Works.—The Brandenburg Manufacturing Co., reported last week, will commence laying pipe for supplying town with gas about October 1.*

Central City—Water Works.—The water works previously reported as to be built by the Central City Water Co. will cost \$40,000. The Central Coal & Iron Co. will do the work. Two miles of from 3 to 8-inch pipe will be laid.

Cloverport—Machine Shops.—The Louisville, St. Louis & Texas Railroad Co. (office, Louisville) will rebuild their machine shops recently burned at Henderson at Cloverport. The citizens raised a bonus of \$20,000 to secure the shops.

Covington—Reservoir.—The contract for completing the reservoir for the water works has been let to D. Shanahan & Co., of Louisville, and not to J. H. Harlow, of Pittsburgh, Pa., as stated last week.

Covington.—The Colorado Coal, Iron & Land Co. has been incorporated by V. P. Collins, J. A. Robinson and Alexander Montgomery. The capital stock is \$100,000.

Georgetown—Electric-light Plant.—The city is considering the erection of an electric-light plant. The mayor can give information.

Glasgow—Wood-working Shop.—J. R. Pedigo is erecting a wood-working shop.

Glasgow—Brandy Distillery.—S. H. Waller & Co. have erected an apple brandy distillery.

Grand Rivers—Lands.—It is reported that a syndicate have raised \$150,000 to purchase 10,000 acres of mineral lands.

Lexington—Electric Plant.—The Lexington City Railway Co. will erect an electric plant to operate their street railway by electricity, as previously reported.

Lily—Coal Mine.—An Indiana company will open a coal mine.

Lily—Coal Mine.—The Lily Mining & Manufacturing Co. have opened a coal mine.

Louisville—Bridge.—The iron and steel bridge to be built across the Ohio river, mentioned in last issue, will be with approaches 9,000 feet long, and will have railroad, foot and wagon ways. The total cost, including terminal facilities, is estimated at \$2,000,000. The Phoenix Bridge Co., of Philadelphia, Pa., have the contract.

Louisville—Saw Mills.—The Louisville Saw Mill Co., reported last week, will operate the saw mills formerly operated by the Astoria Veneer Mill & Lumber Co.

Louisville—Sewerage System.—M. J. Bannon has been awarded the contract to build part of the sewerage system previously reported, and J. R. Gleason contract for a sewer on Walnut street from Fourth to Fifth.

Normal—Lumber Mill.—The Keys Creek Lumber Co. have purchased all the poplar trees on 72,000 acres of land along Beaver creek from McKay & Lanahan and the Bank of Commerce, of Pittsburgh, Pa., and will cut same.

Paducah—Wheel Factory.—The Woodburn-Sarven Wheel Co. will, it is reported, establish a branch factory, and have purchased a site. J. Cobb can give information.

Paris—Creamery.—C. Woodford will start a creamery.

Seebree—Flour Mill.—Moore & Beard have put new machinery in their flour mill.

Stamping Ground—Flour Mill.—A party has been prospecting with a view to building a flour mill.

Stamping Ground—Brick-yard.—Newt. Stone will start a brick-yard.

White Oak—Barrel Factory.—Thomas Craft & Son have started a barrel factory.

Whitesville—Coal Mine.—The Owensboro Coal Co. have struck a new coal vein and will probably develop.

LOUISIANA.

Lecompte—Sugar Refinery.—J. H. Meeker is adding a refinery to the sugar mill on his Home Place plantation.

Loreauville—Sugar Mill.—Adrien Gonsoulin has purchased a supplemental mill for the sugar-house on his Maria plantation.

New Orleans—Coffin Factory.—The New Orleans Manufacturing Co., reported last week, have doubled the capacity of their coffin factory.

New Orleans—Cigar Factory.—S. Hershheim Bros. & Co., reported last week as contemplating enlarging cigar factory, have enlarged their building and added a 100 horse-power engine, 300 incandescent-light plant, &c.

Shreveport—Wagon Factory.—A. M. Jaqua, of Indiana, is thinking of starting a wagon factory.

Westlake—Saw Mill.—W. B. Norris will not add shingle machinery to his saw mill as lately stated, but is adding a circular mill to band saw mill. Capacity will be increased to 100 M feet daily.

Westlake—Dry kilns.—Perkins & Miller, lately reported as to build a (lumber) dry-kiln, have one up and are erecting two more.*

MARYLAND.

Baltimore—Paper Mill.—It is reported that Smith, Dixon & Co. will start a paper mill.

Baltimore—Sugar Refinery.—W. W. Spence is president; Frank Frick, secretary pro tem, and Joshua Levering, treasurer, of the \$1,000,000 stock company previously reported as being organized to build a sugar refinery at Curtis' Bay. A site has been selected.

Baltimore—Electric Motors.—The National Electric Motor Co. has been incorporated by J. R. Simpson, W. G. White, W. E. Amos and others. The capital stock is to be \$250,000.

Centerville—Laundry.—Thomas Sudler contemplates starting a steam laundry.

Frederick—Bridges.—The county commissioners have awarded the Columbia Bridge Co., of Dayton, O., contracts to erect a 135-foot span half iron bridge, 16 feet wide, over the Monocacy river at Devilbliss at \$3,035, and an iron bridge near Middletown at \$2,790.

Hagerstown—Canning Factory.—J. D. Kraft, W. A. Wentz, G. W. Fisher and others, of Baltimore, contemplate starting a large canning factory.

Port Tobacco.—John B. Lyon, P. A. L. Contee, John G. Chapman, J. C. Howard and others have incorporated the Southern Maryland Development & Improvement Co. to deal in lands, start factories, &c.

Washington, D. C.—The Washington Real Estate Co. has recently purchased a tract of land near Lincoln Park from Stephen Flanagan, of Philadelphia, Pa., for \$350,000, and will improve part of it.

MISSISSIPPI.

Dahomy—Oil Mill, &c.—J. S. Richardson has started a new town called Benoit, and a cottonseed oil mill to cost about \$40,000 is reported to be built.

Moss Point—Coffin Factory.—It is stated that a factory for manufacturing coffins has lately been started.

Scranton—Ice Factory.—Captain John Grant will erect early next spring an ice factory of 10 or 15 tons capacity daily.

Vicksburg—Electric-light Plant.—The Hill City Electric Light Co., lately reported as adding an incandescent plant, will erect a brick building 45x100 feet for the plants. Estimates are being received.

NORTH CAROLINA.

Asheville—Publishing.—David M. Vance and Robert M. Furman will publish the Democrat.

Blue Wing—Copper Mines, &c.—The Washington company previously reported as leasing the Raker copper mines and to develop same, have erected a concentrating plant and are sinking three shafts. Capt. Hays is superintendent.

Carthage—Shuttle-block Factory.—G. A. Taylor will start a shuttle-block factory soon.

Charlotte—Cotton Mills.—The Victor Cotton Mills have instructed president to purchase 1,500 additional spindles. Mill has 10,560 spindles now.

Charlotte—Furniture Factory.—The Elliot Furniture Co. has been incorporated to manufacture furniture. The capital stock is \$100,000. Will succeed Elliott & Marsh.

Durham—Electric-light Plant, &c.—W. Duke Sons & Co., reported last week as adding to their tobacco works a factory for manufacturing cigarette cases, will put in a 500-light Edison incandescent plant and have ordered machinery. They contemplate building another storage house 300x100 feet.

Egypt—Stone Quarries.—The Egypt Coal Co., who are developing coal mines, as stated previously, have purchased and will develop brownstone quarries.

Enfield—Shuttle-block Factory.—Temple Gwathney, of Norfolk, Va., previously reported as to start a shuttle-block factory, will locate it at Bellamy's mill, 5 miles from Enfield.

Fair Haven—Gin.—J. G. Foushee is erecting a cotton gin.

Fayetteville—Iron Works.—J. W. Johnson has put new and improved machinery in his iron works.

Fayetteville—Stereotyping.—The Carolina Engraving & Stereotyping Co. has been organized by McRae Barclay and others.

Franklinton—Saw Mill, &c.—J. S. Joyner will erect a saw mill and a sash, door and blind factory.*

Harden—Cotton Factory.—The Harden Manufacturing Co., reported last week as chartered, will build the cotton factory mentioned previously. Capacity contemplated is 2,500 spindles. Water power will be used.

Hendersonville—Water Works.—The bonds for building the water works previously mentioned have been sold and work is reported to be commenced at once. The mayor can give information.

Lowell—Cotton Mill.—B. R. Smith, president, states that the Renwood Cotton Mills, reported

in this issue as burned, will probably be rebuilt, with a capacity of 5,000 or 6,000 spindles.*

Monroe—Publishing.—A paper will be published with M. A. Underwood as editor.

Milton—Mica Mine.—E. M. N. Search, 109 Chestnut street, Philadelphia, Pa., lately reported as leasing and to develop a mica mine, will probably organize a stock company.

Nalls—Gold Mine.—Mrs. M. A. Smith will probably develop a gold mine on her Island creek property.

New Berne—Saw Mills.—D. Stimson is rebuilding one of his saw mills, and expects to rebuild the larger mill also. Machinery for former has been purchased.

Raleigh—Bagging Factory.—The establishment of a cotton bagging factory is projected.

Salem—Paper Mill.—John A. Askew and Charles T. Askew, reported in issue of July 27 as purchasing the paper mill of W. S. Floyd, have failed to conclude the purchase of same and the sale is off.

Sanford—Sash and Door Factory.—The report referred to last week that W. H. Warner, of Rochester, N. Y., has purchased land and will erect a sash and blind factory is incorrect.

Staley—Gin.—Bean & Carter have erected a new cotton gin.

Washington—Knitting Factory.—E. M. Short and others are organizing a stock company to build a knitting factory.

Weldon—Water Power.—The Roanoke Water Power & Navigation Co. will commence about November 1 work on the completion of their canal previously mentioned. It is expected to develop 2,000 horse-power at first.

Wilmington—Planing Mill, &c.—Parsley & Wiggins, previously reported as to rebuild their planing mill and sash and blind factory, have rebuilt their planing mill, added a shingle mill and are erecting large dry-kilns. They will rebuild their sash and blind factory at an early date.

SOUTH CAROLINA.

Anderson—Cotton Mill.—A part of the machinery for the Anderson Cotton Mills, previously reported, has been purchased, to be delivered December 1, and the remainder will be added later.

Blacksburg—Mineral Land.—The Magnetic Iron Ore & Steel Co. have purchased a tract of mineral land adjoining their property from W. B. Wilson, Jr., of Rock Hill, for \$12,000.

Brunson—Saw Mill.—J. C. Heins is building a saw mill.

Charleston—Bagging Factory.—The company lately reported as to start a pine-straw bagging factory will have a capital stock of \$300,000 if organization is completed. A. W. Taylor is interested.

Charleston—Soap Factory.—C. Ernest Metz and N. Peterson will start a soap factory and are purchasing machinery. A building has been secured.

Charleston—Ice Factory.—The Charleston Ice Manufacturing Co., lately reported as to enlarge factory from 24 to 60 tons capacity daily, will increase capital stock considerably. Cold storage will be added also.

Charleston—Causeway.—T. A. Beckett has received contract to rebuild the John's Island causeway. It is about 1 mile long.

Charleston—Canning Factory.—The organization of a stock company to start a factory to can rice birds, vegetables, etc., is talked of.

Clifton—Cotton Mill.—The Clifton Manufacturing Co. are building a new stone dam at their No. 1 mill.

Columbia—Electric-light Plant.—The Board of Regents of the State Lunatic Asylum have ordered a new engine and dynamos to enlarge the electric-light plant at the asylum.

Florence—Tobacco Factory.—The capital stock of the company reported previously as being organized by B. G. Covington to start a tobacco factory will be \$10,000.

Mt. Pleasant—Spoke and Hub Factory.—John C. Mallonee will build the spoke, hub and wheelbarrow factory lately mentioned and has chosen a site. Cost of plant will be about \$10,000.

Orangeburg—Electric Lighting.—It is probable that George H. Cornelson will be given a contract to light the streets by electricity. He has plant at his cotton factory.

Rowesville—Hoop Factory.—W. D. Wolfe will add to his saw mill machinery for manufacturing coiled hoops.

Santuc—Gin.—W. T. Jones has purchased new machinery for his cotton gin.

Winnboro—Brick-yard.—Mr. Holler has put a new engine in his brick-yard.

TENNESSEE.

Brownsville—Gin and Grist Mill.—The Wheelers' Keeling, Gin & Grist Mill Co. has been incorporated.

Charleston—Mining.—The Seneca Mining Co. have commenced the development of their property.

Chattanooga—Paint Factory, &c.—The Chattanooga Construction Co. has been incorporated by C. E. Danforth, H. B. Case, D. W. Hughes and

others to manufacture paint, artificial stone, roofing and paving material; also the construction of bridges, sewers, etc.

Chattanooga.—The Highland View Investment Co. has been incorporated by C. E. Buck, C. V. Brown, J. T. Anderson and others to deal in real estate.

Chattanooga—Machine Shops.—The Cincinnati Southern Railroad Co. (office, Cincinnati, O.) will rebuild the machine shops mentioned in this issue as burned.

Chattanooga—Publishing.—The Journal of Commerce Publishing Co. has been incorporated.

Chattanooga—Blind and Shutter Factory.—The Venetian Blind & Shutter Co. has been organized by Osborne and J. C. Coleman and R. S. Jockman to manufacture blinds, shutters, ornamental flooring and ceiling, etc.

Chattanooga.—Machine Shop.—The Chattanooga, Rome & Columbus Railroad Co. will rebuild their roundhouse and machine shop, previously reported as burned. The loss was \$16,000.

Covington—Saddlery Factory.—Wilson & Dearing are organizing a stock company to start a saddlery factory.

Denson's Landing—Timber Lands.—Capitalists have purchased and will develop 8,000 acres of timber lands.

Epperson.—A stock company will, it is reported, be organized to purchase the Epperson Springs property and 445 acres of timber land from W. R. Rogan, and improve the property. Wells for hot water are to be sunk.

Franklin—Creamery.—A creamery will probably be established.

Franklin—Cotton Factory.—A cotton factory is projected. Reville & Journal can probably give information if anything is done.

Gallatin—Planing Mill, &c.—J. C. Rodemer & Co. will erect a planing mill; also a large hay baling press.*

Jackson—Publishing.—Dr. Frederick Howard will publish the True Baptist.

Jackson—Sewerage System.—John W. Gates, mayor, will receive proposals until October 1 for furnishing and laying vitrified sewer pipe as follows: 1,950 feet of 20-inch, 900 feet of 14-inch, 3,550 feet of 12-inch and 18,700 feet of 8-inch; also 73 manholes and 6 flush tanks. Bids will be received also for furnishing material and constructing 1,950 lineal feet of brick sewer 2 feet in diameter in substitution for the 20-inch vitrified pipe. J. D. Cook, of Toledo, O., is consulting engineer.

Johnsonville—Timber Lands.—It is reported that Chicago capitalists have purchased 50,000 acres of timber lands on the Tennessee river and will develop.

Knoxville—Bottling Works.—Howell & Fox are enlarging their bottling works.

Knoxville—Electric-light Plant.—The Knoxville Electric Light & Power Co. will purchase at once additional machinery for their plant.

Lascassas—Iron Mine.—Richard H. Talley has leased an abandoned iron mine and will probably develop.

Madisonville—Publishing.—Frank L. Fornshell is the name of the party lately mentioned as to publish a newspaper.

Memphis—Oil Mills.—The Diamond Huller & Oil Co., previously reported as to build machine works and a cottonseed oil mill at Memphis, contemplate building cottonseed oil mills at other points.

Memphis—Oil Mill.—The Memphis Cottonseed Oil Co. have increased capital stock from \$10,000 to \$100,000.

Memphis—Oil Mill.—The Hanauer Oil Works, previously mentioned as enlarging their cottonseed oil mill, have increased capital stock to \$150,000.

Memphis—Natural Gas.—The Tennessee Natural Gas Co. has been chartered.

Nashville—Gas Burners.—The Paragon Gas Burner Co. has been incorporated by Henry Wellington, Frederick M. Hill, James Brown, A. Kimber and W. H. Hassy.

Nashville—Cracker and Candy Factory.—The H. B. Grubbs Cracker Co. have sold out and reorganized as the H. B. Grubbs Cracker & Candy Co. They will have \$100,000 capital and run plant to full capacity.

Nashville—Publishing.—The North American Publishing Co. has been chartered by J. A. Kellogg, B. F. C. Brooks, N. S. Menefee and others.

Wallview—Coal Mines, Coke Ovens, &c.—Logan H. Roots, of Little Rock, Ark., is president, Charles P. Richardson, of Chattanooga, vice-president, H. I. Kimball, second vice-president and general manager, J. W. Hudson, secretary, and E. E. Richardson, treasurer, of the New York & New Orleans Coal & Iron Co., previously reported as formed to develop the coal mines of J. C. Wall, build coke ovens, railroads, &c. They intend to build a manufacturing town, probably to be called Kimball City. Property consists of 48,000 acres coal and timber lands, 12,000 acres iron ore lands and 4,000 acres of town site property. All letters should be addressed to H. I. Kimball, Madison Square Bank Building, New York.

Wartrace—Water Works.—The Nashville, Chattanooga & St. Louis Railway Co. (office, Nashville) are improving their water works.

Whitwell—Coal Mines.—The increase in the output of the coal mines of the Tennessee Coal, Iron & Railroad Co., reported last week, will be from 600 to 1,200 tons daily.

TEXAS.

Beaumont—Pottery, &c.—The establishment of a pottery and tile works is projected.

Cisco—Grist Mill, &c.—Blake & Hightower are rebuilding their grist mill and gin reported last week as burned.*

Cleburne—Water Works.—The Cleburne Water Works Co. will probably improve their works.

Dallas—Land.—H. C. Clark has sold 1,424 acres of land in the Brazos bottom to J. B. Goode for \$30,000.

Dallas—Factory.—Stukes & Reid are interesting parties in the manufacture of their patents.

Dexter—Corn Mill, &c.—The Farmers' Alliance are erecting a corn mill and cotton gin.

Fort Worth—Factories.—Thomas De Witt Cuyler, representing a Philadelphia (Pa.) syndicate, has purchased a tract of land near Fort Worth from W. F. Somerville for \$113,000. The syndicate will, it is stated, establish factories.

Fort Worth—Cracker Factory.—A. R. Mignon and others, lately reported as purchasing the Fort Worth Cracker Factory, will enlarge by adding another story.

Fort Worth—Sewerage System.—City Engineer Kahn is preparing maps, profiles, &c., for the remainder of the sewerage system, about 18½ miles, previously reported.

Galveston—Carriage Factory.—E. E. Seixas is building a two-story brick addition, 42x60 feet, to his carriage factory.

Galveston—Cotton Mill.—The Galveston Cotton & Woolen Mills, previously reported as to build a cotton mill, have let contract for brick to Rohman, Milam & Co., and for iron work to C. B. Lee. Contracts for furnishing lumber, cement and other materials have also been let. The company will construct the building themselves.

Goliad—New Town.—A new town called Berclair has been started 17 miles from Goliad.

Goliad—Flour Mill and Gin.—A flour mill and cotton gin have been erected at Fannin Station, a new town 10 miles east of Goliad.

Granbury—Gin.—A cotton gin will be built.

Granbury—Flour Mill and Elevator.—Parties have contracted to build at once a 150-barrel roller flour mill and a grain elevator of 250,000 bushels capacity.

Houston—Flour Mill.—R. P. Smith is in correspondence with parties who contemplate establishing a flour mill in Houston.

Huntsville—Furniture Factory.—A three-story brick addition, 180x50 feet, will be built to the furniture factory in the State penitentiary.

Laredo—Ice Factory.—Galbraith & Harris are moving their ice factory to another site.

Laredo—Candle Factory.—A party has been prospecting with a view to starting a candle factory.

Laredo—Grist Mill, &c.—A grist mill will be erected in connection with the cotton gin reported in last issue as probably to be built.

New Birmingham—Bottling Works.—Kenny & Anderson, of Austin, have moved their mineral water bottling works to New Birmingham.

Orange—Shingle Mill.—E. A. Smith has put new machinery in his shingle mill.

Orange—Saw Mill.—Bankroft & Sons will put new machinery in their saw mill.

Richmond—Publishing.—J. L. Goodman will publish the Register.

Sequin—Cigar Factory.—A cigar factory will be started.

Stephenville—Brick-yards.—N. B. Hurley and N. McLaughlin have started the two brick-yards lately mentioned.

Tyler—Rolling Mill.—H. H. Rowland offers to be one of ten to build a rolling mill.

Tyler—Wagon Factory.—A proposition from an Indianapolis (Ind.) party for the building of a \$100,000 wagon factory is being considered. H. H. Rowland can give information.

Victoria—Electric-light Plant and Steam Laundry.—The Victoria Power, Light & Ice Co. has been incorporated to erect the electric-light plant previously mentioned by T. M. O'Connor, G. H. Levi, J. M. Brownson and others. They have purchased the Crystal Ice Factory and will probably add a steam laundry. The capital stock is \$25,000.

VIRGINIA.

Alexandria.—The Southern & Western Land & Investment Co. has been incorporated with William Dickson, of Washington, D. C., president; John Critcher, of Alexandria, vice-president, and Lewis Van Allen, of Buffalo, N. Y., secretary, to develop mineral lands, &c. The capital stock is to be not less than \$1,000,000 nor more than \$2,000,000.

Alexandria—Electrical Works.—The American Electrical Supply & Appliance Co., capital stock \$500,000, has been chartered to manufacture electrical machinery and appliances. Frank E. Martin, of Brooklyn, N. Y., is president.

Amherst—Cheese Factory.—A cheese factory is projected. George W. Dearborn can give information.

Big Island—Paper Mill, &c.—The Lynchburg Pulp & Paper Co., lately mentioned as to double the pulp mill and build a paper mill, have let contract for furnishing plans and specifications and machinery for the paper mill to D. H. & A. B. Tower, of Holyoke, Mass.

Brook Neal—Machine Shop.—A machine shop is to be built soon. Lumber is now on ground for building.

Buena Vista—Paper Mill.—Plans have been prepared for the paper mill of the Buena Vista Pulp & Paper Co., previously reported. The buildings will consist of a heating house, two stories, 65x100 feet, a machine house, two stories, 50x140 feet, and a boiler and stock house. Machinery with a daily capacity of 10 tons has been purchased.

Buena Vista—Iron Furnace.—The Buena Vista Iron Co. will be incorporated by C. M. Clark, Edmond Pechin, Decatur Axtell, A. T. Barclay and C. F. Jordan to build the 100-ton coke iron furnace previously mentioned.

Danville—Nursery.—Georges S. Sartin, W. J. Donce, J. L. Waring and others have organized a stock company for the cultivation of fruits, ornamental and shade trees, etc.

Glade Spring—Laundry.—D. P. Beatty contemplates starting a steam laundry.

Lexington—Electric-light Plant.—C. W. Irvine, J. T. Forbes and C. B. Guyer are the parties lately mentioned as endeavoring to secure a franchise to erect an electric-light plant.

Lexington—Gas Plant.—A gas plant is being erected at the Washington & Lee University.

Lynchburg—Saw Mill.—Callahan Bros., of Forest, have moved their saw mill to West Lynchburg, and have it in operation.

Lynchburg—Publishing.—John Whitehead has commenced the publication of the Trade Journal.

Lynchburg—Machine Shop.—Efforts are being made to locate a machine shop at West Lynchburg. The Lynchburg Land Co. can give information.

Mansion—Bridges.—Henry W. Adams will receive proposals until October 12 for building an iron and a wooden bridge at Dearing's Ford on the Otter river.

Marksville—Iron Mine, &c.—The Eureka Manganese Co. are surveying a route to convey water to their mines for ore washers, &c.

North Danville—Sausage Factory.—A sausage factory will be started, it is reported.

Richmond—Bridge.—A bridge will be built across the canal at Hull street. The mayor can give information.

Richmond—Motors.—The Richmond Street Motor Co. has been incorporated with Allen Talbott, president, and William Simpkins, vice-president and general manager, to manufacture motors for street railways. The capital stock is to be not less than \$50,000 nor more than \$1,000,000. For the present motors will be made at the works of Simpkins & Hilyer.

Roanoke—Water Works.—The Roanoke Gas & Water Co. have let contract to the Holly Manufacturing Co., of Philadelphia, Pa., to furnish a duplicate pump and boilers of those already in use at their water works.

Salem—Iron Furnace.—Mr. Bachman, of Philadelphia, Pa., is reported as prospecting for a site for an iron furnace.

Salem—Land.—The Salem Land & Improvement Co. have consummated the purchase of the Simmons & Logan farm at \$75,000, reported previously.

Suffolk—Shingle Mill.—McLeary & Causey, reported last week as purchasing a shingle mill, expect to double its capacity.*

Tye River Depot—Woolen Mill.—A woolen mill is being erected.

Wytheville—Lands.—The Brown tract of mineral lands, containing 4,000 acres, has been sold to General Walker and R. E. Withers at \$4,000, subject to confirmation by the court.

Vale—Saw Mill.—W. T. Freeman, reported last week as to erect a cotton gin, may erect a saw mill later.

WEST VIRGINIA.

Blacksville—Oil Wells.—Several oil wells are being sunk.

Bruceon Mills—Coke Ovens.—It is reported that a Philadelphia, Pa., party will build 300 coke ovens.

Cedar Grove—Coal Mining, &c.—The corporations of the Kelley's Creek Coal & Coke Co., reported last week as chartered to mine coal and manufacture coke, are Jennie Pirrung, Joseph Pirrung and E. C. Pirrung, of Hawk's Nest, and Jacob Pirrung and William Pirrung, of Vesuvius, O. The authorized capital stock is \$100,000.

Charleston—Electric-light Plant.—The Charleston Heat, Light & Power Co., previously reported as chartered, have been granted the right to erect an electric-light plant.

Elizabeth—Bung Factory.—Joseph Hale will put considerable additional machinery in his bung factory.

Elk Garden—Coal Mine.—The West Virginia Central & Pittsburgh Railroad Co. (office, Piedmont) will soon erect a dump and hoisting engine at their new mine.

Guyandotte—Saw Mill.—J. W. Bonner will erect a new saw mill to cost about \$8,000 and has bought machinery.

Huntington—Water Works.—The Huntington Water Co. have let contract to the Cook Well Supply Co., of St. Louis, Mo., to sink wells with a capacity of supplying 2,000,000 gallons daily. Cost will be \$5,000.

Keyser—Car Shops.—It is reported that the Baltimore & Ohio Railroad Co. (office, Baltimore, Md.) will shortly commence the erection of large car shops. Report is probably incorrect.

Lewisburg—Flour Mill.—The establishment of a merchant flour mill is proposed.

Lewisburg—Creamery.—The Greenbrier Creamery Co. will expend \$5,000 immediately in enlarging their capacity. Cold storage will be added.

Morgantown—Sewerage System.—The town will decide on September 28 whether or not to issue bonds to build a sewerage system.

Parkersburg—Brick Works.—The Parkersburg Brick & Tile Co. have added machinery to their brick works, doubling the capacity.

Rowlesburg—Lumber Boom.—The Horse Shoe Lumber & Boom Co. has been incorporated by S. Hinkle, of Weston; S. S. Eberly, of Mechanicsburg, Pa.; D. N. Shaffer and others. Capital stock is \$30,000. They will put in booms, dams, &c., at once.*

West Virginia—Coke Works.—Edward B. Leisenring, of Mauch Chunk, Pa., will, it is reported, establish a large coke plant in West Virginia.

Wheeling—Oil Lands.—It is reported that the Standard Oil Co., of Cleveland, O., have bought the oil lands of E. W. Hukill & Co. in West Virginia and Pennsylvania for \$1,500,000.

Wheeling—Pump-house.—The Junction Iron Co. will build a new pump-house to supply their iron mill with water.

Wheeling—Water Works.—The power and pump houses of the water works have been improved. It is probable that new pumps and boilers will be purchased. Superintendent Cummings can give information.

BURNED.

Bon Air, Va.—The Bon Air Hotel owned by James Strong and others, of Richmond; loss \$25,000.

Chattanooga, Tenn.—The machine shops of the Cincinnati Southern Railroad Co. (office, Cincinnati, O.); loss \$25,000. Will be rebuilt.

Lowell, N. C.—The cotton spinning mill of B. R. Smith; loss \$60,000. Will be rebuilt.*

Louisville, Ky.—The planing mill of McClure & Ryan; loss reported at \$40,000.

Montgomery County, Tenn.—The tobacco stemmery of Wilton Barker.

Seaborn, Ala.—The cotton gin of Burgess Bros.; loss \$1,000.

Tampa, Fla.—The cigar factory of Lorenzo, Pendas & Co.

NATURAL GAS AT BRANDENBURG—BRANDENBURG, KY., Sept. 9, 1889.—We will commence laying pipes to pipe this town by 1st of October. This company (Brandenburg Manufacturing Co.) has the exclusive right and privilege of furnishing this place. Would like to have prices on tank and gasometers. GRO. H. CASPERKE, Secty.

WILL ERECT ELECTRIC PLANT—SAVANNAH, GA., September 11, 1889.—Will certainly put in an electric-light plant. The extent of it nor any particulars are not yet decided upon.

MUTUAL ELECTRIC CO.

COAL LANDS TO BE DEVELOPED—BIG STONE GAP, VA., Sept. 5, 1889.—The Virginia, Tennessee & Carolina Steel & Iron Co. has recently bought 1,400 acres of coal land about 2 miles from Big Stone Gap to be operated for coke. Headquarters are 619 14th street, N. W., Washington, D. C.

THE ETOWAH PROPERTY TO BE DEVELOPED—CARTERSVILLE, GA., Sept. 10, 1889.—We will at once begin developing the hematite, specular and manganese ores in the Etowah property. Will put in improved washers, &c.

A. O. GRANGER, President Etowah Iron Co.

IMPROVEMENTS AT THE DUKE TOBACCO WORKS—DURHAM, N. C., September 11, 1889.—We are putting in machinery to make 300,000 cigarette boxes per day. Have also ordered a 500-light Edison incandescent plant for our factory here. Also contemplating building another storage house, 300x100 feet.

W. DUKE SONS & CO.

WILL REBUILD WORKS—SAVANNAH, GA., September 12, 1889.—We will rebuild oil works and barrel factory with enlarged capacity.

BLODGETT, MOORE & CO.

WILL ERECT FURNITURE FACTORY—MIDDLESBOROUGH, KY., September 8, 1889.—Shall erect furniture factory shortly and will want machinery, shafting, &c. Would like to buy out good second-hand plant.

CHAS. G. WEST.

Building Notes.

Abbeville, Ga.—A building and loan association has been organized by H. Stewart and others.

Anniston, Ala.—Leek & Baker have the contract to erect the new edifice for the First Baptist Church, previously mentioned, and have commenced work. It will be 40x80 feet.

Anniston, Ala.—The First Methodist Church, previously reported as to build a new church, may also build a \$10,000 schoolhouse. Church is contemplated to cost \$25,000.

Anniston, Ala.—The building mentioned last week as to be built for colored pupils will cost \$10,000, and not \$100,000. The mayor can give information.

Atlanta, Ga.—L. B. Wheeler has prepared plans for the Confederate Soldiers' Home previously reported. The main building will be 240x75 feet, and cost about \$25,000. Contract will be let shortly.

Atlanta, Ga.—M. C. Kiser contemplates erecting a five-story office building. Bruce & Morgan are preparing plans.

Augusta, Ga.—The Augusta Orphan Asylum, lately mentioned as to be rebuilt after being burned, will be of brick, five stories, 165x50 feet. Lewis F. Goodrich has prepared plans.

Baltimore, Md.—The Grand United Order of Nazaries Joint Stock Association, capital \$20,000, will either build or purchase a hall.

Baltimore, Md.—The Baltimore, Chesapeake & Richmond Steamboat Co. will erect a three-story brick building on Light street near Lee; Jacob H. Aull, 6 two-story houses in the Annex; F. O. Singer, Jr., 16 three-story houses on Druid Hill avenue, and 5 on Townsend street; J. B. Cook, a three-story warehouse on Schroeder street.

Big Stone Gap, Va.—Hotel.—Work, it is stated, has been commenced on a \$125,000 hotel. The Big Stone Gap Land & Improvement Co. can give information if true.

Blotom, Ala.—A branch of the Southern Building & Loan Association has been organized with W. F. Tyler, president; S. E. Gardner, treasurer, and Dr. W. C. Cross, secretary.

Blue Springs, Ky.—Hotel.—The name of the company lately mentioned as organized by Daniel Turney to rebuild the burned Arlington Hotel, lately mentioned, is the Blue Lick Springs Co. Capital stock is \$500,000. A railroad to the Kentucky Central Railroad will be built also.

Bowling Green, Ky.—A branch of the Southern Building & Loan Association has been organized with H. E. Jenkins, president, and W. B. Hill, secretary and treasurer. Stock to the amount of \$20,000 has been subscribed for.

Carthage, N. C.—Moore county will rebuild the courthouse just burned. D. A. McDonald can give information.

Charlotte, N. C.—Proposals for erecting and completing the U. S. courthouse and postoffice building will be received until October 2 by James H. Windrim, supervising architect, Washington, D. C.

Charlotte, N. C.—The United States Mint will be improved at a cost of \$8,000. Mr. Cramer, superintendent, has specifications.

Dallas, Texas.—W. Snyder will erect a two-story frame residence to cost \$9,000.

Dallas, Texas.—J. B. Goode has purchased 40 lots, and will, it is stated, build residences.

Decatur, Ala.—A block of brick store buildings will be built on Second avenue.

Decatur, Ala.—The Cotaco Opera-house Co. has been organized to build a \$50,000 opera-house at the corner of Second avenue and Johnson street. The Decatur Land, Improvement & Furnace Co. can give information.

Denison, Texas.—W. B. Munson and others, previously reported as to erect a building on Houston avenue, have let contract to E. W. Cloney. It is to be 60x161 feet, and cost about \$22,000.

Dresden, Tenn.—Hotel.—J. W. Moran is building the hotel previously reported.

Dresden, Tenn.—A building and loan association has been organized with B. D. Irvine, president; John McGlothlin, treasurer, and R. D. Hart, secretary.

Durham, N. C.—W. Duke Sons & Co. contemplates building a storage warehouse 300x100 feet.

Egypt, N. C.—Hotel.—The Egypt Coal Co. will build a fine hotel at once, and have designs drawn.

Fort Worth, Texas.—The city council have adopted plans for the high-school building previously reported. It is to be of stone, four stories, 93x73 feet, and will have a chemical laboratory.

Fort Worth, Texas.—R. E. Maddox will erect a four-story brick hotel building on Fifteenth and Houston streets, an office and hall building on Main street, and a three-story opera-house at Rusk and Fifteenth streets; Thomas Roche contemplates erecting a large building on Main street; C. H. Rintleman intends erecting several

buildings to cost about \$25,000; A. S. Byers will erect a four-story building at Main and Seventh streets; two \$14,000 residences will be built.

Frankfort, Ky.—The Frankfort Building & Investment Co. has been organized with William Lindsay, president; Alvin Duvall, vice-president, and Fayette Hewitt, general manager.

Franklin, Tenn.—Henry H. Cook, John A. McFerrin, Park Marshall and others are organizing a local building and loan association.

Galveston, Texas.—M. Lanker will erect a residence to cost about \$20,000; the McDonnell estate, 2 store buildings to cost \$7,000; D. Sampson, a \$5,000 residence; R. B. Hawley, a \$5,000 residence, and the Galveston Wharf Co., a \$5,000 office—N. J. Clayton is architect; M. L. Scott will erect a brick business house to cost \$6,000; B. Heidenheimer, a stone conservatory to cost \$5,000; Mrs. Talfor, a \$5,000 dwelling; L. B. McKinney, a \$5,000 residence, and F. Cannon, a \$12,000 residence; Mrs. Darragh will improve her residence at a cost of \$15,000—Alfred Muller is architect.

Gonzales, Texas.—W. J. Bright, secretary school board, will receive proposals until September 23 for erecting the brick and stone college building previously reported. J. R. Gordon, of San Antonio, is the architect.

Gretna, La.—The Union Oil Co. will build large seed houses.

Halifax, N. C.—The Halifax Hotel has been purchased by Northern parties, who will enlarge and improve it.

Hillsboro, Texas.—W. C. Dodson, of Waco, has prepared plans for the new courthouse for Hill county previously reported. The estimated cost is \$85,000. Bids for construction are wanted.

Hot Springs, Ark.—Dr. J. J. Walker will build a residence on Central avenue to cost \$7,500.

Houston, Texas.—A new theatre will be built on the Palace Theatre site. John Bell can give information.

Huntsville, Texas.—W. W. Adickes will erect a \$6,000 residence.

Huntsville, Texas.—Alfred Muller, of Galveston, is the architect for the addition to the Sam Houston State Normal School, previously reported. It will cost \$40,000.

Key West, Fla.—B. B. Wharton will receive until November 7 plans, specifications and bids for building a brick courthouse for Monroe county to cost not more than \$23,000.

La Grange, Ga.—A branch of the International Building & Loan Association has been organized with M. L. Fleming, president, and J. L. Schaub, secretary.

Laredo, Texas.—James T. Murphy is preparing plans for two school buildings to be erected by the city.

Lexington, Va.—General F. H. Smith will build a \$6,000 residence.

Lynchburg, Va.—The contract for erecting the National Exchange Bank building, previously reported, has been awarded to John P. Pettyjohn at about \$15,000. It will be three stories, 42x122 feet.

Macon, Ga.—Alexander Blair has prepared plans for the Christ Church Home, to be built at a cost of \$10,000.

Marshall, Texas.—The Texas & Pacific Railroad Co. (office, Dallas) have awarded the contract for building their hospital previously reported to William Forslund at \$14,800.

Memphis, Tenn.—J. Marks will build a residence to cost about \$14,000. S. E. Des Jardines, of Cincinnati, O., prepared the plans.

Memphis, Tenn.—The Memphis Grand Opera House Co. have let the contract to build their opera-house reported previously to R. P. McClure, of St. Louis, Mo., at \$85,645. It will be four stories, 90x228 feet. Total cost will be about \$110,000.

Meridian, Miss.—Wiener & Meyer are having plans prepared for a two-story brick stable, 200x75 feet, with an L two-stories, 66x75 feet.

Middlesborough, Ky.—Mr. Hubbel, of Lancaster, has organized a company to build an opera-house.

Morrilton, Ark.—The Catholics will build a church to cost \$7,000.

Mulberry, Ark.—A large school building is to be constructed. F. Kobel can probably give information.

Napoleonville, La.—Hotel.—S. J. Blanchard is erecting a hotel.

Newnan, Ga.—The Newnan Cotton Mills have let contract to G. B. Rooks, of Lenola, to erect a cotton warehouse. Roof will be iron.

Orangeburg, S. C.—Hotel.—The erection of a large hotel is projected. G. H. Cornelison can probably give particulars if anything is done.

Orlando, Fla.—The contract for building the depot for the South Florida Railroad, previously mentioned, has been let to W. T. Cotter at \$18,871.

Paducah, Ky.—The Commercial Club will prob-

ably organize a \$50,000 stock company to erect a club building.

Roanoke, Va.—James Bayliss will erect a three-story brick hotel, 50x90 feet, to cost about \$20,000. The Roanoke Construction Co. have the contract.

Rocky Mount, N. C. R. H. Ricks will erect a prize tobacco warehouse.

Somerset, Ky.—Hotel.—W. H. Floyd, architect, of Chattanooga, Tenn., has awarded the contract for the hotel lately mentioned to Samuel Stone at \$10,000.

South Pittsburg, Tenn.—Christ Church will erect a school building.

Staunton, Va.—The Newport News & Mississippi Valley Railroad Co. have let contract to W. F. Chesterman, of Richmond, to build a new depot. Work has commenced.

Talladega, Ala.—George W. Chambers has commenced work on 6 brick store buildings.

Texarkana, Texas.—The Catholics will build a church to cost \$10,000. N. J. Clayton, of Galveston, is architect.

Thomasville, Ga.—Evans & McLean will build a brick warehouse.

Tyler, Texas.—Hotel.—Messrs Swan & Long are considering the building of a fine hotel.

Valdosta, Ga.—The Farmers' Alliance will erect a cotton warehouse and have purchased a site.

Valdosta, Ga.—Hotel.—The Ocean Pond Investment Co. and others will probably build a hotel at Lawrence, a new town.

Waco, Texas.—Samuel Sanger will build an \$18,000 residence. Samuel Newsome, of San Francisco, Cal., prepared plans.

Waldo, Fla.—A sanitarium is reported to be built during the winter by Northern parties. Ned. E. Farrell can give information.

Warrenton, Va.—Fletcher Bros. will erect a large business house.

Washington, D. C.—The contract to build the addition to the Third Precinct police station has been let to James R. Young at \$6,783.

Washington, D. C.—Misses C. L., M. S. and M. T. McCullough will erect 17 brick dwellings, to cost \$10,000; John E. Waugh, 5 residences, 55x120 feet, to cost \$10,000; Mrs. Amelia Fluger, 2 dwellings, to cost \$5,400; J. E. Gadsby, a two-story residence to cost \$5,000; Mrs. Pinn, a \$5,000 residence; Mrs. G. W. Adams, a two-story stable, 25x32 feet, to cost \$5,500; E. J. Hannan has prepared plans for 8 two-story dwellings, to cost \$5,600.

Westminster, Md.—Hotel.—Dr. J. G. Keller, of Baltimore, will organize a stock company to build a summer hotel. He has bought 11 acres of land.

Wynne, Ark.—A building and loan association, capital stock \$15,000, has been organized with B. M. Smith, secretary, and S. S. Miller, secretary and treasurer.

INDUSTRIAL NOTES FROM EUFAULA—EUFAULA, ALA., Sept. 14, 1889.—The Eufaula Water Co. has been purchased by A. M. Baldwin, Montgomery, Ala., subject to the bonded indebtedness. No change in the management is contemplated. We may change our water supply, at present springs and creek, to bored wells. Correspondence on this subject is requested by the writer. Our \$100,000 cotton mills, which began operation February 1, show a dividend of 1 per cent. Eufaula Oil & Fertilizer Co., costing \$30,000, have steamed up. They will add an ice plant in time for the coming summer. Eufaula Gas Works are doubling their capacity and adding a Thomson-Houston electric-light plant. The work is now in progress. An \$80,000 iron bridge is being built at this place by the Central Railroad of Georgia.

R. H. WALKER, Supt.

BRANCH HANDLE FACTORY AT MIDDLEBOROUGH—KNOXVILLE, TENN., Sept. 14, 1889.—We expect to erect a branch factory this fall at Middleborough, Ky., having secured ground for same. We have all necessary machinery needed for this mill.

STANDARD HANDLE CO.

WILL ADD ELECTRIC-LIGHT PLANT—ATHENS, GA., Sept. 14, 1889.—The Athens Gas Light Co. has just closed a contract with the city of Athens to erect electric lights in place of a portion of the gas lamps now in use. Work will be commenced at once, and pushed forward as rapidly as men and money can move things. Athens is forging ahead.

C. D. FLANIGAN, Agent.

TO BUILD FLOW FACTORY—MONTGOMERY, ALA., Sept. 14, 1889.—The Farmers' Alliance Exchange will commence the erection at once of a large implement factory at Montgomery. Will want motive power. Have already bought 3 car-loads of machinery for factory. Will also build several oil mills in the near future in different parts of the State.

GEO. F. GAITHER, Secty.

SHUTTLE-BLOCK FACTORY—CARTHAGE, N. C., Sept. 11, 1889.—I expect to start a shuttle-block factory shortly.

G. A. TAYLOR.

MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Asphalt Paving.—Proposals for constructing 750 square yards of asphalt pavement will be received until October 9 by Oswald H. Ernst, colonel corps of engineers, Washington, D. C. Specifications can be had at his office.

Boiler and Engine.—George F. Gaither, secretary Farmers' Alliance Exchange, Montgomery, Ala., wants boiler and engine for plow factory.

Boilers, Engines, &c.—The Fitzgerald Patent American Compound Co., Huntington, W. Va., want boilers, engines, shafting, wooden pulleys and a few iron pulleys.

Boiler and Engine.—Perkins & Miller, Westlake, La., will want in about 60 days a boiler and an engine 16x24 inches.

Boiler, 20 or 25 horse-power, is wanted at once by John L. Crittenden, Pine View, Va.

Car Seals.—C. E. James & Co., Chattanooga, Tenn., want address of parties manufacturing leads and wires for sealing cars.

Cars.—The Louisville & Nashville Railroad Co., Louisville, Ky., is reported as in the market for 1,000 freight cars.

Concentrators.—J. H. Fish, Dahlonga, Ga., will purchase concentrators.

Constructors' Supplies.—James Fulton, paymaster-general U. S. navy, Washington, D. C., will receive proposals until October 8 for furnishing Morse drills, emery wheels, grindstones, wash-basins, &c. Particulars on application.

Corn Mill.—W. W. Farmer, Harts Road, Fla., wants all machinery for a corn mill.

Cotton Machinery.—B. R. Smith, Lowell, N. C., will want complete outfit of machinery to rebuild the burned Renwood Cotton Mills. Capacity will be 5,000 or 6,000 spindles, for making yarns from 8s to 36s.

Drill Press, &c.—Suspension drill press and pulley and table for boring out fly-wheels and other wheels are wanted by the James Bates Elevator Works, Pratt and President streets, Baltimore, Md.

Edger.—L. E. Starbird, Spring City, Tenn., wants an edger of latest make at once for saw mill.

Engine.—C. W. Ennis, Milledgeville, Ga., wants a 50 or 60 horse-power engine, either new or second-hand, first-class.

Engine.—W. Browder, Russellville, Ky., wants a good second-hand steam engine, ½ or 1 horse-power.

Flour Mill.—J. C. Beery & Co., Harrisonburg, Va., will purchase flour mill machinery.

Gang Edgers.—J. A. Hostetter, Rowlesburg, W. Va., wants 2 or 3-saw gang edgers.

Grist Mill and Gin Machinery.—Blake & Hightower, Cisco, Texas, want machinery, including engine and boiler, to rebuild burned grist mill and gin.

Hay Press.—J. C. Rodemer & Co., Gallatin, Tenn., want a large hay-baling press.

Iron Bridge.—Henry W. Adams, Mansion, Va., will receive proposals until October 12 for building an iron bridge at Dearing's Ford, on the Otter river.

Lathes, &c.—Lathes, planers, or shapers, drill-presses, bolt-cutters, blowers, shafting, pulleys (wood and iron), &c., will probably be wanted by the Cleburne Foundry & Machine Co., Cleburne, Texas.

Machinery.—The North Texas Coal Mining Co., Dallas, Texas, want information as to machinery used for pulverizing coal and putting it up in blocks for fuel purposes.

Mining Machinery, &c.—W. P. Laramore, Cartersville, Ga., wants machinery for mining coal and manufacturing coke.

Planer.—J. E. Childs & Co., Lanark, Ark., want a planer for a lumber mill.

Planing mill outfit is wanted by J. C. Rodemer & Co., Gallatin, Tenn.

Rice-cleaning Mill.—W. W. Farmer, Harts Road, Fla., wants all machinery for a rice-cleaning mill.

Saw Mill.—Walter Snyder, Philadelphia, Pa., wants information as to cost of a first-class portable saw mill with capacity of 10 to 15 M feet per day.

Saw Mill.—W. F. Mercier, Irene, La., wants prices on a swinging circular saw for sawing stove wood.

HETHERINGTON & NASON,

Manufacturers and Dealers in Supplies for

Boiler Makers, Machinists, Railroads, Steam AND Gas Fitters

Boiler Plate and Tank Iron, Lap-Welded Pipe and Boiler Tubes, Boiler and Sheet Iron Rivets, Steam Brass Goods and Engine Trimmings, Iron Valves and Fittings, Pipe Workers' and Machinists' Tools, Wood and Iron Pulleys, Belting, Hose and Packing, SEWER PIPE, FIRE BRICK and CLAY.

405 and 407 Elm Street, Dallas, Texas.

—ZELL'S IMPROVED—

Patent SAFETY BOILERS

MANUFACTURED BY THE

CAMPBELL & ZELL CO.

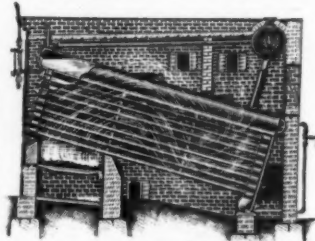
IRON FOUNDERS,

And Contractors for Steam and Power Plants.

ALICE ANNA & EDEN STREETS,

BALTIMORE, MD.

Send for circulars.



Saw Mill Outfit.—A 10 or 12 horse-power engine (upright preferred), a hand saw, a wood-turning lathe, a jig or scroll saw, and necessary machinery for making sash, doors and blinds in a small factory, are wanted by J. S. Joyner, Franklinton, N. C.

Shingle Mill.—McLeary & Causey, Suffolk, Va., will probably purchase a double-block shingle machine.

Spoke and Hub Machinery.—Prices on such machinery are wanted by C. W. Ennis, Milledgeville, Ga.

Steam Heating.—Captain A. H. Young, Newport, Ky., will receive proposals until October 7 for constructing a system of steam heating for the U. S. A. post at Newport.

Stone Mill Machinery.—The Chattanooga Marble & Stone Co., Chattanooga, Tenn., want 100 horse-power boilers, engine, sand and rubbing beds, &c., for stone mill.

Tanks, &c.—The Brandenburg Manufacturing Co., Brandenburg, Ky., want prices on tanks and gasometers.

Well Boring.—R. H. Walker, superintendent water works at Eufaula, Ala., solicits correspondence in regard to securing a supply of water from wells.

Wire Brush.—About 20 square feet best tempered steel wire brush, No. 26, in strips not less than 1½ inches wide, and the wire teeth to be two inches in length above leather back or case, are wanted by J. H. McCormick, care Times-Democrat, New Orleans, La.

CONTEMPLATE MOVING SOUTH—PORTLAND, IND., Sept. 7, 1889.—We visited several Southern cities with a view to locating our wagon factory, and we are now in active correspondence with several points South in regard to the matter, and if the proper inducements are offered we will certainly locate somewhere in one of the Southern States. Our factory is first-class, and has a capacity of 30 to 40 wagons per day.

J. E. ADAIR.

TO BUILD FLOUR MILL—EDOM, VA., Sept. 11, 1889.—We have bought the Clem & Wenger mill site in Harrisonburg and expect to build a flour mill at once. We have engine and boiler, but have not determined as yet whose machinery we will purchase.

J. C. BERRY & CO.

COTTON-SEED OIL MILL—ROWLAND, N. C., September 9, 1889.—S. R. Townsend is building mill at this place; has bought machinery.

P.

The Fort Worth Loan & Construction Co.

CAPITAL, FULLY PAID, \$100,000.

We are prepared to furnish plans and construct large buildings, public or private, and when desired carrying part of the cost of construction as a deferred payment.

PRINCIPAL BUSINESS OFFICE, FORT WORTH, TEXAS. EASTERN OFFICE, EQUITABLE BUILDING, BOSTON.

MINERS' LAMPS



HUNT & CONNELL, Limited, SCRANTON, PA.

C. R. MAKEPEACE & CO. ARCHITECTS and MILL ENGINEERS

PROVIDENCE, R. I. Plans, Specifications and Estimates furnished for Cotton and Woolen Mills.

LOCKWOOD, GREENE & CO.

MILL ENGINEERS,

NEWBURYPORT, MASS.

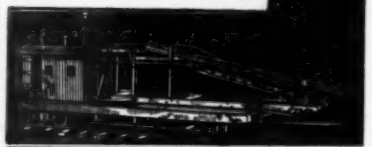
PLANS AND SPECIFICATIONS FURNISHED FOR THE CONSTRUCTION EQUIPMENT AND ORGANIZATION OF COTTON AND WOOLEN MILLS.

The BOOMER & BOSCHERT KNUCKLE JOINT PRESS

FOR BALING Cloth, Paper, Yarn, &c. Or for any other purpose requiring great pressure. BOOMER & BOSCHERT PRESS CO. 329 W. Water St. Syracuse, N. Y.

CAR PILE DRIVERS

Extension truss, to drive from one bent to another. 20 feet late. al swing, 9 feet from center. Fitted up with our new-style Nasmith Steam Pile Hammer. VULCAN IRON WORKS, CHICAGO.



W. H. COLE, Electrical ENGINEER

—AND—

Consulting Electrician,

80 Fifth Ave., New York.

Tests, Measurements and Estimates of all kinds. Sole agent of the Phoenix Incandescent Lamp Co. Lamps for any System and Candle Power.

POPULAR AND DIRECT ROUTE.

THE BAY LINE

For Old Point Comfort, Norfolk and the South.

Steamers leave daily (except Sunday) Union Dock 6.30 P. M., Canton Wharf 7 P. M.; arrives Old Point Comfort 7 A. M., at Norfolk at 8 A. M., Portsmouth 8.15 A. M. At OLD POINT COMFORT connect with CHESAPEAKE & OHIO RAILROAD for Richmond, Charlottesville, Greenbrier, White Sulphur Springs, Louisville, Cincinnati and all points West. At NORFOLK connect with NORFOLK & WESTERN RAILROAD for Petersburg, Richmond, Lynchburg, Roanoke, Bristol, Knoxville, Chattanooga, Memphis and the Southwest; also with the NORFOLK SOUTHERN RAILROAD for Elizabeth City, Edenton and Eastern North Carolina. At PORTSMOUTH, VA., with SEABOARD & ROANOKE RAILROAD for Weldon, Raleigh, Southern Pines, Charlotte, Fayetteville, Newberne, Wilmington, Charleston, Columbia, Augusta, Savannah, Jacksonville and all PRINCIPAL SOUTHERN CITIES.

Palace Steamers, Unsurpassed Cuisine, Undisturbed Night's Rest. Sure Connection.

For Tickets and information apply at Company's Office, 129 E. Baltimore St. or on board steamers.

E. BROWN, G. T. A. KENNEDY JONES, Agent.

A Great Enterprise.

In our issue of June 15th was published the following editorial, under the above caption:

The MANUFACTURERS' RECORD is in possession of definite information of an undertaking of unusual magnitude to be inaugurated in the South within a few weeks. A New York syndicate has purchased lands aggregating in area nearly 70,000 acres and possessing a remarkable combination of advantages. It has iron ore of a high grade, an abundance of coking and steam coal and millions of feet of timber. It has facilities for both rail and river transportation, is in one of the healthiest localities in the South, and is surrounded by magnificent farming lands. A manufacturing town will be built up under the management of a man who has been accustomed for years to handling large enterprises—one of the most energetic and successful promoters and managers in the country. The plans are now maturing, and when in proper shape the readers of the MANUFACTURERS' RECORD will be given full particulars.

Since that announcement, while fully apprised of the progress of the syndicate, we have refrained from noticing it until all its plans were fully matured and its organization perfected. We are now authorized to give a full account of this gigantic enterprise.

A company has been organized under the name of "The New York & New Orleans Coal & Iron Co."

This company has purchased lands in Marion county, Tennessee, locally known as the "Wallview" property. This consists of 48,000 acres of coal and timber lands, 12,000 acres of iron lands, and about 4,000 acres of town-site property—a total of 64,000 acres. The directors of this company are: Hon. Logan H. Roots, president of the First National Bank of Little Rock, Arkansas; Mr. Charles P. Richardson, of Chattanooga, many times a millionaire and a man of marked business ability; Mr. George J. Long, of the extensive iron manufacturing firm of Dennis Long & Co., of Louisville, Ky.; Mr. C. A. Lysterley, president of the Chattanooga National Bank; Mr. S. M. Patten, architect, of Chattanooga; Mr. E. Watkins, president of the Chattanooga street railway system, and of the American Investment Co. of that city; Mr. John W. Wall, a prominent business man of Huntsville, Ala.; Col. A. J. McBride, capitalist, of Atlanta, Ga.; Mr. J. W. Hudson, of Wallview, an extensive land owner; Judge L. L. Cochran, capitalist, of Fort Payne, Ala.; Mr. E. P. Carpenter, capitalist, of Brattleboro, Vermont; Mr. J. H. Bryant, president of the Seattle Coal & Iron Co., New York, and Mr. H. I. Kimball, of Atlanta. The executive officers are: Hon. Logan H. Roots, president; Mr. Charles P. Richardson, first vice-president; Mr. H. I. Kimball, second vice-president and general manager; Mr. Ed. E. Richardson, treasurer; Mr. J. W. Hudson, secretary.

This board of directors and list of executive officers is one of the strongest that has been combined in the organization of a South-

ern industrial enterprise. Hon. Logan H. Roots is a man of unusual business ability and judgment, who commands the confidence of the most conservative financiers of the country. Vice-president and General Manager Kimball has won a reputation for conceiving and carrying to completion great enterprises that require executive skill of the highest order. This is so fully recognized throughout the South, that ever since, by his masterly management of the Atlanta Cotton Exposition of 1881, he gave to the world a knowledge of the vastness and variety of its natural resources, Mr. Kimball has been importuned to accept the management of many large enterprises, but until now he has declined all such overtures. When his attention was first called to the great property of which he is now the general manager, the magnitude of the proposed undertaking awakened his interest, and after repeated visits to the place, and the employment of expert examiners in whom he had confidence, he decided to connect himself with the company. This, of itself, is a guaranty that the business of the corporation will be conducted on a scale and with a force worthy of the magnificent property that is to be developed.

The Wallview lands have a frontage of three miles on the Tennessee river. Their extreme length from north to south is eighteen miles, and their greatest width is five miles. In Walden's Ridge, a spur of the Cumberland Mountains, and within this property, are 12,000 acres of iron ores, which, by the concurrent estimates of expert mining engineers, are believed to contain 1,250,000,000 tons of red fossil, and 300,000,000 tons of brown hematite. The fossil ores carry sufficient flux for smelting, whether used alone or with other ores. On the same property, two and a-half miles east of South Pittsburg, are six workable veins of coal, varying from three to eleven feet in thickness, estimated to contain 537,000,000 tons. Analyses give to this coal 74 per cent. of fixed carbon, and less than one per cent. of sulphur, and to the coke made from it 93 per cent. of fixed carbon. Both the iron ores and the coal have such elevation and dip that from the tunnels made by the miners loaded cars can be run by gravity to the river, the railroad or the coking ovens at a great economy of time and labor. Five-sixths of this property is covered with virgin forests of hardwoods. Lumber experts estimate that there are 1,817,950,000 feet that may be profitably cut. The soil of the entire property is fertile, and much of it is covered with a dense growth of native grasses. The climate is salubrious and delightful at all seasons.

Besides the navigable waters of the Tennessee, there are several lesser streams bounding or within the property that add materially to its value. Transportation by river is

supplemented by railroads, one of which, the Nashville, Chattanooga & St. Louis, now crosses the property, and three others are building towards it. Such in brief is the property the New York & New Orleans Coal & Iron Co. has purchased and is to develop. With the strong men who are its managers, the immense value of its ores, coal and timber, the excellent location, the healthful climate and fertile soil, this corporation has before it the promise of a brilliant and most successful career.

A Great Boom for Ramie.

We have constantly urged in these columns the great economic importance to the South of raising other vegetable fibres than cotton. To-day we take great pleasure in announcing that our urging has evidently not been in vain, and that an attempt is about to be made to encourage the culture of ramie, which is to be on such a substantial basis that it seems as if success must result from it.

Ramie, or China grass as it is sometimes called, is a native of Asia, but grows to great perfection in this country, as several tests have already shown. It makes beautiful fibre, and is not only an excellent substitute for fine quality flax, but is also extensively used to mix with silk. The demand for it is very great in the making of lawns, light sail cloth, etc. Such great possibilities lie in this fibre that a number of wealthy New England gentlemen have organized a stock company with the first object of creating a demand for the fibre. They then propose to encourage its culture in every reasonable way. This company has already bought 280 tons of the fibre in London, and has contracted direct with China looking toward the purchase of 1,000 tons more. So much interest has already been awakened that several manufacturers have offered to contract for some twenty tons a day.

After having created a market, these gentlemen hope to induce Southern land owners to plant ramie, and to aid the planter who has a good many acres of it, they will decorticate the fibre at their own expense, then pay the planter for his fibre. The planter is thus relieved from that terrible bugbear, decortication. When it is borne in mind that 1,500 pounds can be raised to the acre, with three cuttings, and that the fibre is worth five cents a pound or more, it is evident that this crop will prove a very profitable one.

Sir Lionel Playfair, the noted member of the English Parliament, has been in Boston recently, and he was so impressed by the possibilities of this fibre that he will ask Parliament at its next session to offer bounties for the encouragement of ramie growing in India.

In our advertising columns these New England gentlemen put forth a feeler, to see what the condition of the ramie market in the South is.

Be Honest and Stick to Your Bargains.

The people of Lincoln county, Tennessee, wanted a railroad to traverse their territory. They were willing to pay \$150,000 towards the cost of its construction. A contract was made with a certain company that protected the rights of the builders and of the county, and the work of construction began and was completed. One of the conditions of the contract was that the railroad should be finished at a specified date. The builders, delayed by stress of weather and other things entirely beyond their control, were unable to comply with the letter of their contract, although they did with its spirit, for they finished within two days of the appointed time. The county has the railroad and is satisfied, but the company that built it is not, for it cannot get the \$150,000 of bonds that were pledged by the county. The reason of the refusal is that the contract ceased to be binding when the time named in it expired. Technically, the county attorneys are probably right, but in equity they are greatly wrong. The people have received what they bargained for, and are bound in honor to keep their agreement and to pay what they promised. The technical plea that the builders were two days behind time in finishing their work may be good law, but it will not be accepted by capitalists and bankers as a valid reason for refusing to pay a just debt.

We call attention to this transaction because it is on a par with the action of two counties in South Carolina which we recently felt compelled to criticize. In all these cases there is evidence of a disposition on the part of the county authorities to repudiate obligations whenever they can find a legal loophole of escape. We should be sorry to think that, in the instances referred to, the authorities would be sustained by the people whose votes sanctioned the bargain. We prefer to believe that they are as honest and honorable as we know that all but an insignificant minority of Southern freeholders are. But the evil of their actions lies in the wrong impression that is made upon the country at large. A few more similar incidents would seriously impair Southern county and State credit, and prevent contractors from negotiating such securities in the future, thus blocking the path of railway builders, and of many others engaged in the various phases of Southern development. If from no other reason than that of "policy," the South can ill afford to seek to escape from obligations of this character. Having made a bargain, honesty requires that it shall be kept in spirit as well as in letter.

THE MANUFACTURERS' RECORD is the greatest industrial journal in the South, and has done more to build up our Southern country than any other.—Waynesville (N. C.) Courier.

FORT PAYNE FORGING AHEAD.

The Autumn Outlook for New England's Healthy Young City in the State of Alabama.

The Model Hotel Now Open for the Luxurious Entertainment of All Who Go South in Search of Money-Making Opportunities.

[Written from Fort Payne, Ala., for the MANUFACTURERS' RECORD by a Staff Correspondent]

Building, *building*, BUILDING—that's what they've been doing all summer at Fort Payne—building factories, building hotels, building stores, building water-works, building homes, building a new railroad, building everything, until to-day the place is unrecognizable to those who last saw it when the gay spring flowers were in bloom on the adjacent mountains of iron ore, fire-clay, kaolin and coal.

State, extending from the shores of the gulf to the Tennessee river, there may be, for aught I know, some localities where the summer climate is abominable, but if any one think that the Wills Valley, in which stands Fort Payne is hotter at 9 o'clock in the morning, at noon, or at 4 P. M. than Boston or Portland, in Maine, or Hartford, Connecticut, or Topeka, Kansas, let him sit down and write to some of the New England people or Kansans who have spent the summer at Fort Payne. Here

And while referring enquirers concerning the climate to men who have tried it, I am moved to remark that at no new town either in the West or in the South—and I have visited nearly every one of them—have I found the newcomers better satisfied with the existing state of affairs or more sanguine of the increasing prosperity which each succeeding year will bring to Fort Payne. They are all glad they came, and you couldn't hire a man of those who came here at the start for business to move away.

And this strengthening of confidence by a knowledge gained by residence in the place, by a study of its resources, by an intimacy with its environment and the country of which it is to be the commercial center, is all the more a matter for congratulation when contrasted with the feeling of faint heartedness found at most new towns directly after they have had their first attacks of the speculative fever. Of course, backed as it was by so much brains and money, Fort Payne had its period of excited buying of real estate early in its history; but the excitement seemed rather to promote than to retard wholesome investment, and has been followed by one of

enough new towns to fill a cemetery, viz., the lack of a decent place to eat and sleep.

"We can do without books, what is knowledge but grieving,
We can do without hope, what is hope but deceiving,
We can do without love, what is passion but pining,
But where is the man that can do without dining?"

If the man who wrote that had been compelled to spend a day at Fort Payne in the spring of the present year of grace, he would have found not one man but five hundred men whom necessity, the mother of invention, had taught how to do without either dining, breakfasting or supping. For my own part, I registered a solemn resolution never to set foot in the place again till the new hotel was finished, furnished and the pot a-boiling. That Fort Payne didn't "die a-borning" for lack of hotel accommodations shows that Providence is on Fort Payne's side. That Fort Payne grew from 500 to 2,500 people, and succeeded in getting a million or so of dollars invested within its limits before it got a place for providing the visitor with the necessary "creature comforts," is one of



THE DE KALB HOTEL.

And right at the outset I am going to tell something which might throw suspicion on everything else in this letter but for the fact that there are scores of reliable men ready to corroborate it by affidavit. The day I reached Fort Payne (September 3) everybody said was warmer than the average of the entire summer, and yet that very night it took two blankets and a thick spread to enable the guests at the De Kalb to sleep with solid comfort; and I was credibly informed that there had been scarcely a night during the season when at least one blanket was not required.

If the preceding paragraph should peradventure be read to the man in search of a purchaser for property in the land of blizzards and blighting winds, he would no doubt endeavor to offset the blessing of cool nights by the assertion that the daytime heat in Alabama is unendurable. Now, inasmuch as Alabama is quite a large

are the names of a few men, most of whom have been here for some months, and who I think would take pleasure in giving the desired information: Col. J. W. Spaulding, formerly of Portland, Maine; Mr. W. N. Bursiel, formerly of Manchester, New Hampshire; Mr. George Uniacke, formerly of Nova Scotia; Mr. G. E. Lothrop, Cashier First National Bank of Fort Payne, formerly of Vermont, but more recently of Concordia, Kansas; Mr. W. H. H. Minot, who went from Maine as a boy, but has lived in the Northwest for many years; Mr. A. W. Train, a New Englander who has been living for several years in Alabama; Mr. W. A. Bradley, now assistant cashier of the Bank of Fort Payne, formerly with the Merchants' National Bank of St. Johnsbury, Vt., and for the last two years with a bank somewhere in the State of Kansas; Mr. H. C. Rushmore, who came to Fort Payne from Clyde, Kansas; Mr. Joseph G. Taylor, formerly of Montpelier, Vermont, or, in short, to any man among the hundreds who have moved here since Fort Payne began to be a town.

the most remarkable building booms in the history of young municipalities. Nor has the work in this direction, which the last five months have witnessed, reached its pausing point. In fact as yet it is hardly under full headway.

On the 4th day of February last Fort Payne was a lonesome village with 531 inhabitants. The stores were little more than sheds, the dwellings little more than shanties. The natives stood in bewildered groups gazing on the "Yankees" that soon began to make the unquicken pulses of the place throb with genuine life. But the natives were not like *Amelie Rives'* heroine, for as soon as they saw the difference between the new "quick" and the old "dead," they gave the ghost "the shake," and began to align themselves with the men who had come to make Fort Payne a city. Inside of six weeks more people were getting off at Fort Payne than at any station on the Queen & Crescent route.

There was one great drawback to Fort Payne during the first six months of its career, and that was one which has killed

the miracles of the 19th century.

But to-day Fort Payne has not only one good hotel, but two of the finest in the South. I used to think the Anniston Inn was the best appointed and most inviting hostelry in Alabama, but since I have been a guest of this the newest venture in the line of luxurious hotels, I shall have to erase the Inn from the top of the list, and in its place write "The De Kalb."

There are 125 rooms in the "De Kalb," all furnished in a style to make a poor man forget his poverty and to sleep not only the sleep of the just but that sounder, more refreshing, sleep of a man with money in the bank. There are 16 bath-rooms, hot and cold water, electric lights and carpets fit for a palace. There are 3 imported cooks, the *chef* having acted in that capacity for two years and a half at the Vendome in Boston. The second cook filled that position for years at the Parker House in Boston, while the baker was brought from the St. Nicholas, the swell hotel of Cincinnati. Mr. W. N. Bursiel, who has had experience in the Pullman service is the manager of

the DeKalb, over the portal of which these words should be written:

Here are provided bed and fare
Fit for prince or millionaire.

The visitor to Fort Payne will not only be favorably impressed, but will regard the progress of the last five months as a verification, as far as was possible in so short a time, of a prediction made by Hon. D. H. Goodell, now governor of New Hampshire, and printed some time last April in the

The men who have built here have built not for a year or so, but for a life-time.

No man with any knowledge of how towns are built and of the causes and conditions of success, can visit Fort Payne without feeling that the work of the last six months will be exceeded by the development of the next six months, and so on in arithmetical progression for a number of years to come. It is only a question of how rapidly the public can be apprised

was done so admirably that within twenty-four hours of the moment the first paper was seen on the streets, the people of Fort Payne had bought the entire edition and extra copies had to be struck off to meet the demand from the outside, which continues apparently unabated. It was through the courtesy of Mr. Vernon that the MANUFACTURERS' RECORD is enabled to illustrate this article. The cuts were all made from photographs and are exact representations

amount to much. Let us see if they are. In Mr. Edward Atkinson's article on the cost of making iron, which appeared several weeks ago in the MANUFACTURERS' RECORD, the following statement is made: "Coke of a suitable quality to make iron is becoming very scarce in Great Britain. The mines in and around Durham, the principal source of supply, are becoming very deep and therefore very hot. The veins are but two feet in height." Commenting on this statement the Fort Payne Herald says: "If any one has doubts as to Fort Payne working her coal veins profitably, such doubts should be dispelled at once. The coal veins in this locality are from 30 to 40 inches in thickness as against two feet around Durham. Further comment is unnecessary." The Herald might have added that the extraordinary ease with which this Fort Payne coking coal may be mined and laid down at the ovens, counts for more than twice its thickness under difficult conditions. So soon as the mineral railroad, now being rapidly pushed up along the side of Lookout mountain, is completed to the mines, two hundred coke ovens will be ready to go into operation.

I cannot at present undertake to describe all the manufacturing plants now under way, nor even those completed. Among the latter are an extensive carriage factory, already crowded with work, a large plant for making stoves, now almost ready for the first cast, also several large brick yards and lime works.

The furnace will have a capacity of seventy-five tons of iron per day. Under the direction of Superintendent Mullen the foundations are nearly all in and the Columbus (Ohio) firm which has the contract for building the furnace report sixty-two car-loads of material ready for shipment and which only awaits the superintendent's inspection to be started South.

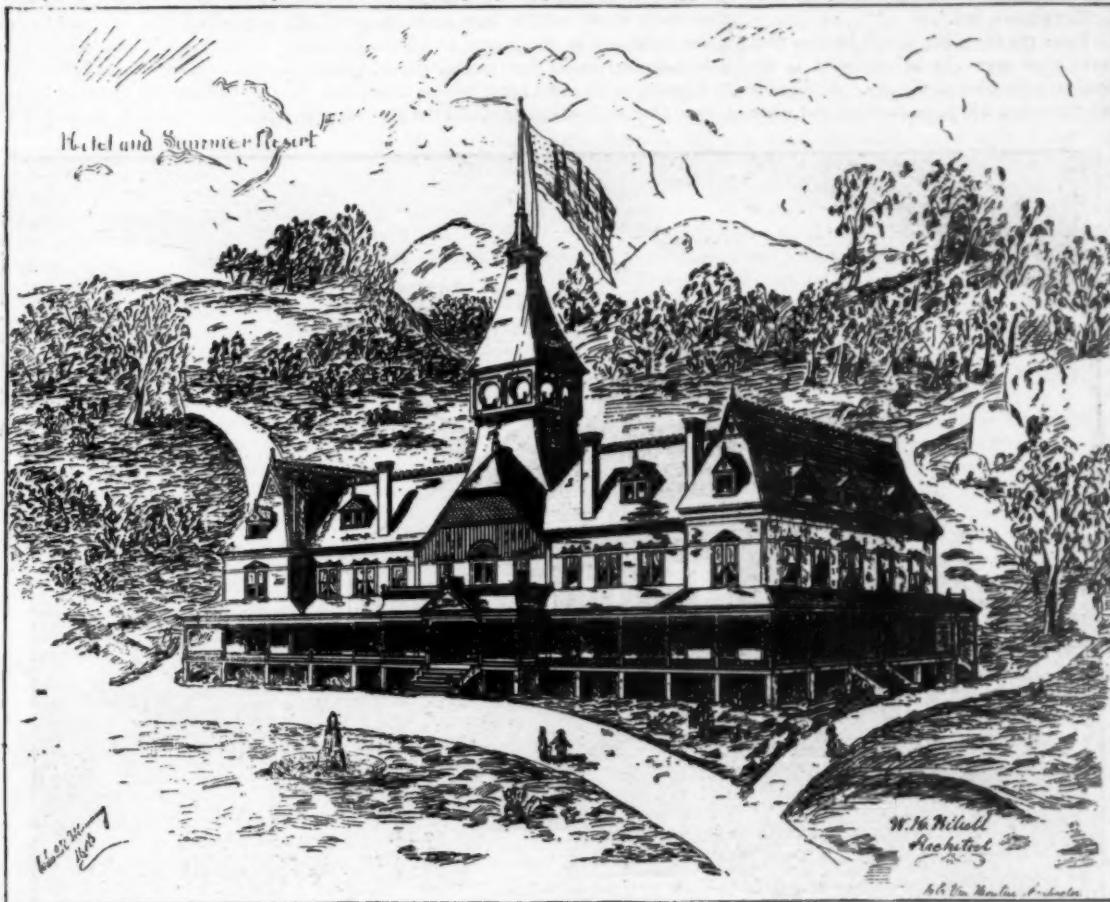
The most direct way to reach Fort Payne is by the Queen & Crescent from Cincinnati, the time being only about twelve hours.

It may be worth while to republish here the following article from the last issue of the Fort Payne Herald:

WHAT THERE IS HERE TO MAKE FORT PAYNE A CITY.

"On no less than three different occasions has the Herald answered the question, 'What is there in and around Fort Payne to make it a city?' This same question has been asked so often of late that the Herald will again answer it somewhat in detail.

It is not necessary to go into any ex-



MANITOU PARK HOTEL.

MANUFACTURERS' RECORD, that Fort Payne would in three years be a city of 20,000 people. By actual count more than 400 houses have been built since the first day of last March. Among these are a number costing upward of \$50,000. The fire-brick works, alone, over which little ado has been made, but of which a complete description will be given directly, will have

of the money-making opportunities here presented. Of course it takes "line upon line, precept upon precept, here a little and there a little" to get people to come to a new town, but the managers of Fort Payne are fully awake to the folly of hiding their light under a bushel.

And not only is this true of the managers of the town company, but of the citizens

except that the cut of the "De Kalb" fails to do justice to that charming example of modern architecture.

But to return to the proposition that the only condition precedent to the fulfilment of Gov. Goodell's prediction is the making known of the resources in which the future of Fort Payne is based. Among those resources are coking coal, iron ore, kaolin, fire-brick clay, limestone, fine red building stone and quantities of timber, all on the



THE ORE BEDS NEAR FORT PAYNE.

cost, when completed, about \$60,000, while the rolling mill will cost nearly three times that amount. The two hotels cost \$40,000 apiece, the ice factory has cost \$20,000, and the water works, now supplying the city, cost twice that sum. On a single business block \$25,000 have been expended, while there are three or four others that have cost all the way from \$8,000 to \$15,000. The private residences are likewise constructed substantially as well as attractively.

generally. For instance, Mr. James M. Vernon, of the Fort Payne Herald, proceeded a few weeks ago to get out, without the promise of patronage to the extent of a single dollar, a sixteen page illustrated edition of that admirable weekly. Over six hundred dollars were spent for illustrations and enough paper was bought to print fifteen thousand extra copies. Then work was begun preparing sixteen pages of contemporaneous local history. The work

company's property and within a few hundred yards of the centre of the city.

A great many would-be builders of new towns are in the habit of laying great stress on the quantity of this or that mineral or material without considering either its quality or the facility with which it may be mined; and a good deal has been said by rival developers to make the impression that no matter if they were coking coals, the Fort Payne veins were too thin to

tended remarks as to the iron ore and coal. Of these we have an abundance and to spare. The iron ore will not only supply the furnace, but the company intends also to mine it in sufficient quantities to supply all the furnaces in this immediate vicinity. It is possible the Chattanooga furnaces will secure most of their supplies from this point. The ore is of such a superior quality that it is bound to be in great demand.

As to the coal, it is of such an excellent

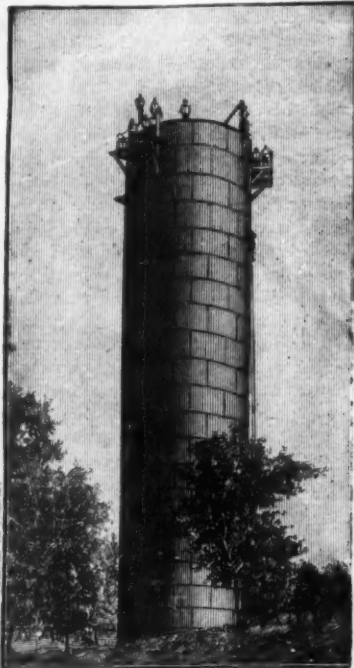


SCENERY AT THE ENTRANCE TO MANITOU CAVE.

coking quality that it is now conceded that Fort Payne will make the finest coke to be found anywhere in the South. Two hundred coke ovens are to be built, and from these the furnace will be supplied, while the surplus will be shipped to furnaces all along the line of the Alabama Great Southern Railroad.

Besides making coke, coal will be mined for domestic use and steam purposes. It will be taken out in quantities to supply the demand.

The extensive beds of fire-clay for making fire-brick has induced the Fort Payne



WATER WORKS STAND PIPE.

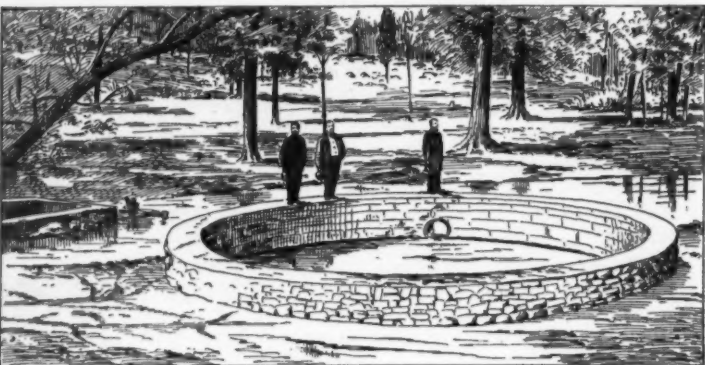
Coal & Iron Co. to erect a \$40,000 fire-brick plant, and it will be ready to go into operation on or before October 1. The capacity of this plant will be 20,000 fire-brick per day, beside a large output of sewer tile and terra cotta work.

The clay for the manufacture of building brick is so abundant that there are now half a dozen brick-yards in successful operation.

The lumber interests are very extensive, and already there are several saw mills and planing mills in operation.

Then we have building stone of different kinds, limestone, kaolin, tan bark, and, in fact, almost everything to make Fort Payne a manufacturing city. The resources of the country are so abundant that all kinds of manufacturing can be engaged in.

It may be interesting to know how many



SPRINGS AT WATER WORKS.

men will be employed in the different enterprises now being built or which will be under construction between now and November.

The coal mines will give employment to about 400 men.

The furnace, 150.

Fire-brick works, 200.

Rolling mill, 250.

Stove works, 75.
Coke ovens, 150.
Edge tool works, 200.
The tannery, 300.
Brick-yards, 200.
Ice plant, 15.
Mineral railroad, 25.
Ore beds, 100.
Dummy line and electric-light plant, 25 men.

Planing and saw mills, 50 men.

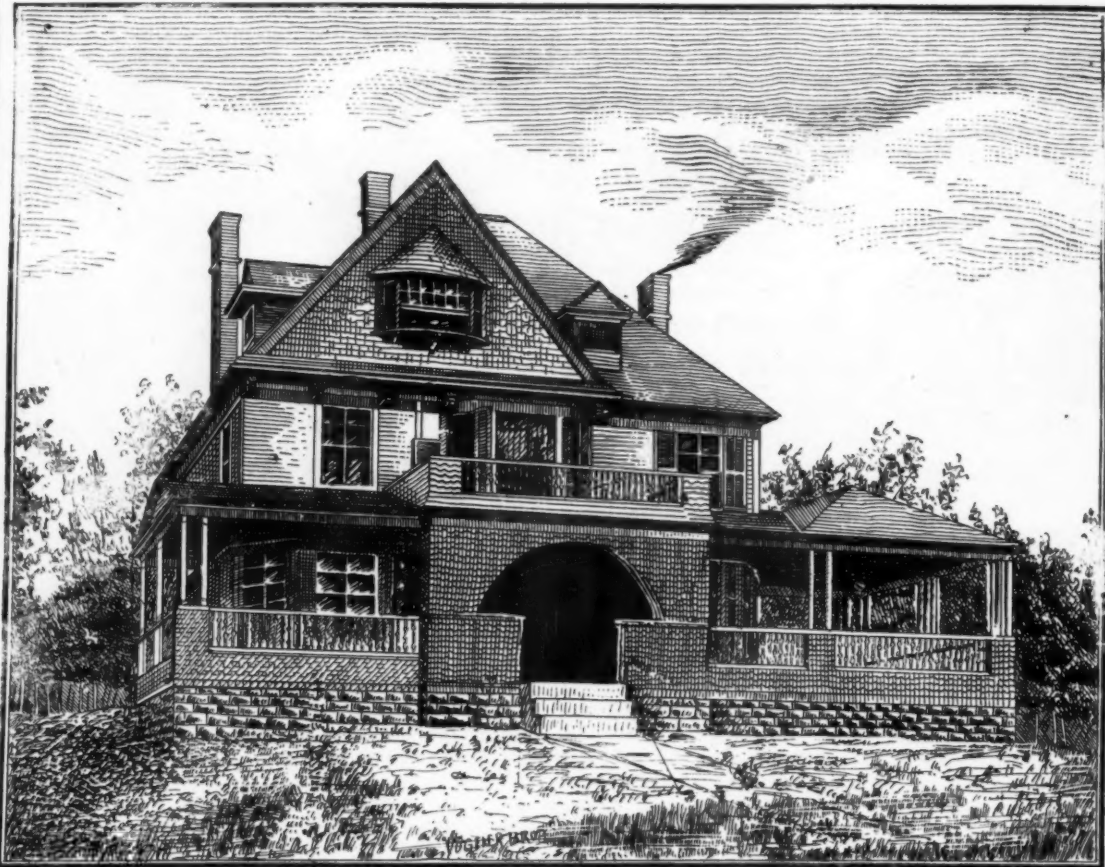
Contractors, 200.

From the foregoing it will be seen that over 2,200 men will be employed in the various industries of the city. A majority of these men will have families, and when

The Success of a New Virginia Town.

A few months ago the MANUFACTURERS' RECORD announced the organization of a company to build a town at Iron Gate, Va. Up to last week, the work of laying out the town and securing industries had made such progress that at a public sale, lasting three hours, 218 lots sold for \$42,325 without any wild speculation to run prices up. The result of this sale is such as to inspire confidence in the future of all the new industrial towns that may be started in Virginia on the same broad basis as Iron Gate. One lot brought \$770, and the pur-

There are 80 car-loads of machinery now on the ground for the rolling mill, which will have a capacity of between 75 and 100 tons a day. The Hanging Rock Stove Co., of Ironton, Ohio, have closed a contract for moving their entire plant to Iron Gate. A company is in course of organization for building a basic steel plant, and \$50,000 of the stock of the company has been taken by the C. & O. R. R. Co., while Mr. M. E. Ingalls, the president of the C. & O., individually subscribed for a considerable amount. A fine hotel is now under construction. Some time ago the MANUFACTURERS' RECORD commended Senator Daniel and Governor Lee for wisely turning their



RESIDENCE OF W. P. RICE, ESQ., FORT PAYNE.

all the industries which are either being built or will be under headway in a short time, are in operation, it is certain to give the city a population of at least 10,000 people.

The readers of the Herald can now get a pretty clear idea of what Fort Payne is building upon for the future. She has the

chaser refused \$900 cash for it the same day. Among the buyers were a number of men of note, such as Mr. Jos. E. Troop, owner of the Everitt furnace, of Pennsylvania; A. R. Courtney, of Richmond; E. C. Best, superintendent St. Lawrence Boom & Manufacturing Co., a concern which handles ten to thirty million feet of lumber; Mr. R. L. Parrish, the general counsel for the Chesapeake & Ohio Railroad, who is also a large stockholder in the company, and others.

Iron Gate is fortunately located as regards furnaces. The Longdale, the Low-moor and the Glen Wilton furnaces, which produce largely over 100,000 tons of iron a year, are within a radius of 5 miles, while the Callie furnace, now out of blast, is within the same circle, and arrangements will probably be made for starting up again or moving to Iron Gate. Victoria furnace is but 20 miles distant, and Roaring Run, 10 miles. Within 10 or 12 miles down the river the Craig's Creek Railroad, now under construction, strikes the James River Division of the Chesapeake & Ohio Railroad, bringing a fine iron district hitherto undeveloped within easy reach of Iron Gate. The grade from Iron Gate to tidewater is down-hill all the way, and engines are able to haul 45 loaded cars.

Added to these advantages were a good site and good transportation facilities. Moreover, Mr. Jacob Yost, the general manager, wisely sought first to secure the location of industries before selling lots.

attention for the future to the industrial interests of their State rather than to politics, and in Mr. Yost we have another illustration of how rapidly this change of sentiment is going on. Although a very young man, he has represented his district in Congress, but now has turned his talents to the development of the manufacturing interests of his State. Under his management Iron Gate doubtless has a brilliant future before it.

EVERY dealer in machinery, mechanic or business man, or persons who desire to invest in the South, should subscribe to the MANUFACTURERS' RECORD. It is published in Baltimore, Md., and contains in each issue reliable articles from various parts of the South on the progress of that rapidly improving section. They are not written for the purpose of showing the writer's skill in word painting, but gives an account of things just as they are. The MANUFACTURERS' RECORD is doing a good work, and we congratulate it upon its success. Its last issue appeared in a beautiful new suit of plain, clear-faced type, and is a fine specimen of the typographic art.—Advocate, Westminster, Md.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South cannot find a better medium than the MANUFACTURERS' RECORD.

THOMAS P. GRASTY.

ASPHALT IN ALABAMA.

Some Interesting Facts About Asphalt and Its Uses.

An Alabama Company Developing Asphalt Mines.

[Spec. corresp'dence MANUFACTURERS' RECORD.]

BIRMINGHAM, ALA., Sept. 9, 1889.

Asphalt, a variety of bitumen, or "mineral pitch" as it has sometimes been called, is found in a native condition in many parts of the world, but the main supply of commerce comes from a lake of it on the island of Trinidad. This lake was regarded as more of a natural curiosity than anything else until Edward J. De Smedt, of Brussels, combined the refined asphalt with crushed limestone and sharp, silicious sand, and produced what promised to be very lasting pavement. Since these experiments greatly improved methods of manufacture have come into use, and time has demonstrated that for general paving purposes there is nothing equal to asphalt for a sanitary, cheap and durable pavement.

In addition to making paving material, asphalt is used for making various kinds of cement, for water-proofing material, for insulating material, for making varnish for "patent" leather, japan for metal work, etc., but at least 95 per cent. of the world's supply goes into pavements.

Crude asphalt contains a large amount of earthy and other foreign matter and considerable water. But by the refining process the water is boiled out and much of the foreign matter eliminated. When refined it is too brittle for commercial use, but by combining with it a small percentage of crude petroleum or other oily substance, the paving or roofing material is ready for use.

Asphalt paving has been tested to a greater or less degree for 30 years or more, and these tests have demonstrated that it is unquestionably the best all-around paving material. It is smoother and less noisy than granite, much more durable than macadam or wood, is water-proof, contains no vegetable matter to decay, can be kept clean at small expense, is less slippery than either wood or stone, and enables larger loads to be drawn by the same force and with less wear and tear than any other form of pavement. Some asphalt pavements in the United States have proved failures because the pitchy product that comes from coal in gas making was used instead of the natural asphalt.

Asphalt pavement is laid either in sheets or in blocks. When laid in sheets, a solid foundation of concrete is made, then the asphalt is cooked on the spot and laid while boiling hot to a depth of two or three inches, then rolled until cold. When asphalt blocks are used on a naturally good foundation, a few inches of gravel and sand make a sufficiently strong bed upon which to lay the blocks. The generally accepted method of making these blocks is to roll limestone until it passes through a fine screen. This stone is then heated to 260 degrees F. A certain proportion of thoroughly cooked asphalt and some oil is then added. The whole mass is mixed mechanically, causing the limestone dust to combine with the asphalt, making the very durable calcareous-bituminous cement. The hot material is pressed into blocks under 100 tons pressure.

The most careful and thorough tests both in this country and in Europe have demonstrated the fact that asphalt is unquestionably the best paving material. It is a little more expensive than granite usually, and possibly is not suited to streets where very heavy traffic is carried on, but for ordinary traffic it has no equal. The same force will draw three times as much of a load on an asphalt pavement as on a granite pavement. In all of the leading cities asphalt

pavements are in great demand, and a considerable fleet of vessels is constantly employed bringing the crude material from Trinidad. Asphalt pavements that were laid in Washington over 10 years ago are said to be now in good repair. So great has been the success of this pavement in Washington that over 4,000,000 yards have already been laid in 34 cities in the country, and all manufacturers of asphalt blocks and sheet paving have, it is said, all the business they can attend to.

In view of this steadily increasing demand for asphalt, the supply of which comes from the island of Trinidad, the South is to be congratulated upon the discovery of extensive asphalt deposits in Alabama, adding not only to the wealth of that State, but of the whole South. Asphalt mines near Falkville, in Morgan county, Ala., are owned by the Alabama Asphalt Mining & Land Co., of Birmingham, of which Mr. W. H. Wooldridge, of that city, is president. Mr. P. H. Thomson, civil and mining engineer, has just made a report on these mines which will prove of general interest. Under date of September 1, 1889, he writes to the company:

"Before reporting the character and results of the developments of the mines of your company, it might be proper for me to state briefly why, before commencing the work, I decided these mines promised results of greater commercial value than any other in Alabama.

The asphalt deposits of Alabama are found in a sub-carboniferous limestone, closely allied to what is known as the Heidelberg. This formation extends from the Tennessee river in Morgan county in a southwesterly direction, crossing the Mississippi State line near Meridian. At least one outcrop is known in Mississippi, in the same general direction.

Wherever this limestone has been noticed indications of asphalt have been found. They have been reported in the counties of Pickens, Fayette, Winston, Lawrence and Morgan. So far as my information extends, and I have made diligent search, no asphalt has ever been seen east or north of these mines. A singular feature of these deposits is that the purity and quantity of the asphalt increases as you approach the northeast. Here at these mines all the indications point to the fact that the asphalt has come to the surface under great pressure, forcing itself not only through the earth in large veins, but fracturing the rocks and filling the cavities with pure asphalt. That the pressure still exists is shown by the fact that when the asphalt is removed from a crevice a few hours suffice to replace it.

The limestone has a slight dip toward the southwest, just enough to account for the difference in elevation between the deposits. I give a few of these elevations, as bearing on the point that this is the source from which all the other deposits derive their asphalt. These elevations are barometric, and given by the United States Geological Survey; the figures denote elevation above the level of the sea: Alabama Asphalt Mining & Land Co., near Falkville, 770 feet; North Alabama Asphalt Co., near Danville, 690 feet; Union Asphalt Co., Tar Springs, Lawrence county, 500 feet; deposit at Oil Springs, Winston county, 470 feet. You will perceive that there is sufficient fall to account for the appearance of the asphalt at these points, especially as this fall is identical with the dip of the strata, which is from northeast to southwest.

Having determined that this was the source from which all the others originated, it only remained to determine whether asphalt could be raised here in such quantity, and at such cost, as to make the deposit commercially valuable. On this point there remains no doubt in my mind.

The mines are situated 5 miles east of Falkville, a station on the Louisville &

Nashville Railroad, and are about 20 miles from Decatur. The property consists of 130 acres owned in fee simple and 320 acres of mineral rights, and is free from incumbrance. It has been known for many years that asphalt existed upon the property and several efforts have been made to develop the mines. None of these attempts were successful, but their failure is very easily accounted for, as some failed for want of money and others for want of intelligent direction. The last attempt prior to the present was the drilling of a well to the depth of 244 feet. The record of this well has been mislaid, but from reports made to me by various persons, who were employed on the work while it was in progress, I learn that several seams of asphalt were passed through, one of 12 inches, one of 15 inches, and one of 32 inches in thickness. The relative depths at which these seams were reached are not definitely known. All the witnesses agree in the general facts, and being persons having no interest in the matter, their testimony is entitled to credit. Ordinarily, on such a statement, the proper method for developing the mine would have been to sink a shaft so as to reach these seams as soon as possible. I was, however, confronted with a financial problem which rendered such a course not advisable, and I was also of the opinion that I could strike the mother vein with less expense. Adopting this idea, I ran drifts into the mountain, which aggregate some 250 feet in length, and have finally located the mother vein.

All these drifts were in asphalt, but it was more or less impure. The drift now in progress yields asphalt that is not only chemically pure, but the vein becomes more liquid and abundant at every foot. I am satisfied that a few days more work will uncover the vein, and expect when the pressure of the rock is removed that the asphalt will flow. In this I may be mistaken, but at all events it can be easily and economically raised. This result would have been attained before this, but we have encountered heavy streams of water and been compelled to provide an outlet for it at great expense of time and money. This has now been provided, and a few days will enable me to uncover the source whence the asphalt flows.

I have a quantity of crude asphalt on hand, but as the refining apparatus is not enclosed, have been prevented by the incessant rains from refining it. The process of refining consists simply in melting and straining the asphalt, to relieve it from the earth and stone adhering to it. I have also been waiting to obtain special rates of freight, as those now in force are exorbitant.

While the most valuable product of these mines is asphalt, there underlies the whole property, apparently, a bed of blueish gray marl, very rich in phosphates. No analysis of this marl has been made, but it has been practically tested by neighboring farmers and its value as a fertilizer fully established. It can be mined at an expense not to exceed \$1 per ton.

In conclusion, if this property is properly developed it will prove highly remunerative. It needs buildings and machinery to attain the best results, but even with the crude methods I have used and the total want of economical means of transportation, the mine should pay heavy dividends. There is no doubt that the asphalt is here and in large quantities. It is chemically pure and needs no refining to fit it for use."

THOS. P. GRASTY.

OPENING COAL MINES—BLOCTON, ALA., Sept. 12, 1889.—The Excelsior Coal Co. is a new organization that is opening mines on the line of the Briarfield, Blocton & Birmingham Railroad, about midway between Blocton and Montevallo. The principal stockholders of the company are the same as of the Cahaba Coal Mining Co. at Blocton, and it has the same officers.

[Spec. corresp'dence MANUFACTURERS' RECORD.] CHATTANOOGA, TENN., Sept. 16, 1889.

Pig Iron.—The market is in a better condition to-day than it has been in a long time. There has been a general upward tendency of prices for the last two months, yet so gradual as to disarm any disposition that speculators might have had to get in their work. All the furnaces through the Southern districts are now making money and deem the markets of the country in a very satisfactory condition. While there are many consumers who are desirous of making long time contracts the disposition of the stacks does not respond to their wishes, and as a general thing the furnaces only market what production is in sight in the immediate future. Some anxiety is being expressed at the possible shortage of cars for the next three to five months. The fact is that none of the Southern lines have had cars enough to do their legitimate business, and now that the cotton and other crops are upon them, all demanding cars, which together with the continued increased output of pig iron and articles that are being manufactured South for shipments to Northern and Western points, is going to place the lines in a position that they will not be able to respond to. \$13 to \$13.50 may be considered the basis of good No. 1 foundry at the furnace bank.

A Paint Ore.

HAASVILLE P. O., AYOUILLES PAR., LA., September 3, 1889.

Editor Manufacturers' Record:

I wish to bring to your notice a strange geological formation some seven or eight miles west of Haas. On Bayou Cocodrie is a large ledge of iron ore, extending into the hills no one knows how far, nor how rich the ore is. The most singular thing about this ore is its peculiar formation, being shell-like. When broken open the cavity is found to be filled with a substance resembling paint, and is known by natives as the "paint rock."

This substance when brought to light by bursting the ore-shell is about the consistency of cream; some is the color of rich cream, some red, brown, various colors. The owner of the land informed me that he painted the name on a boat with some of this peculiar paint and found it as lasting as the best paint usually sold in the paint shops. He used the raw material as he found it in the ore rock to paint with. After being exposed for some time to the air it hardens to about the consistency of good chalk, and is used for marking, as chalk is.

J. C. WRIGHT.

CONTEMPORARY BUILDING HOTEL—BALTIMORE, MD., Sept. 16, 1889.—I have purchased 11 acres of the Rosedale property, Westminster, including a fine mineral spring and park. I expect to improve it with a summer hotel that will accommodate about 60, and at some future time enlarge. My plans are not as yet matured.

J. G. KELLER.

ELECTRIC PLANT AND RAILROAD—HOPKINSVILLE, KY., Sept. 13, 1889.—The city of Hopkinsville has granted a franchise to myself and associates to build an electric light and street railway. We will organize in the near future for that purpose.

S. H. TURNER.

COAL MINES TO BE DEVELOPED AND COKE OVENS BUILT—ANNISTON, ALA., September 14, 1889.—W. P. Laramore, of Cartersville, Ga., has begun opening a seam of fine coking and blacksmith coal in St. Clair county, Ala. He will erect coke ovens and a first-class plant throughout. The seam of coal has never before been worked; samples of coke made from it which have been analyzed show it very low in sulphur and ash and very high in fixed carbon. He will need machinery.

G. S. PATTERSON.

MANAGERS of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises and needing machinery or supplies of any kind will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

Assisted Immigration.

This question comes frequently to the MANUFACTURERS' RECORD from all parts of the South: "How can we induce Northern farmers to settle in our neighborhood?" Accompanying the question often are pertinent suggestions of practical value. Among those before us is one from Lancaster, South Carolina, to this effect. Let owners of large bodies of good arable land in healthy localities have the same surveyed in tracts of 25 and 50 acres. And then advertise that they will give away every third tract to the head of a family who has the means to build a house and to subsist his family until he can get returns from his farm. The bond for the deed should bind the land owner and the settler alike; the first to deliver a warranty deed as soon as the improvements were made; the settler to begin building within a specified time after entering into the contract. By such a procedure the rights of both parties would be protected.

We like this proposition. It means business. The gentleman making it has lost faith in State immigration bureaus, and thinks that land owners must take the matter into their own hands, if much is to be accomplished. He, for one, proposes to prove his faith by his works, for he believes that "assisted immigration" of this kind would bring to the South a large number of thrifty, industrious young men with their families, who would quickly assimilate with their neighbors and become esteemed and valuable citizens.

It might be well for a number of land owners (in Lancaster county for instance) to unite in trying this experiment, so that within a radius of ten miles a hundred farms would be offered as gifts. These land owners could make up a small purse to advertise their offer, and to pay some real estate agent in New York or elsewhere at the North to answer inquiries, and to ascertain whether applicants for the gifts were the kind of people the donors had in mind.

The donation of every third farm to the right sort of settler is intended to advance the value of the adjacent land. If a man owning 1,000 acres, worth at present \$5 an acre, were to give away one-fourth of it (250 acres) to ten thrifty farmers, their improvements would in two years' time treble the value of the remaining property. All of the ten would have friends at the North, who, learning of their prosperity, would be glad to join them, and to purchase and improve the adjacent land. This is no fancy. It has been done ever since the Western Reserve in Ohio was settled more than half a century ago, and can be done all over the South. But it must be done right or it will fail. Northern farmers will not go into malarial districts knowingly, nor will they remain when they find it exists. They will not go upon poor, worn-out, water-washed lands, when

millions of fertile acres are to be had for a few dollars apiece. But where they can have cleared land of fair quality, in healthy neighborhoods and near to schools, churches, mails, and transportation to market, there they will gladly go and remain. The gifts to a few will form the nucleus around which the many will settle until "the wilderness shall be glad for them," and the county in which they locate will realize many benefits from their presence.

Why Charleston is Worried.

The people of Charleston, judging by the News & Courier, are greatly worried over rumors that Mr. John M. Robinson, the president of the Seaboard & Roanoke system, one of the most progressive and far-seeing railroad men of the country, is preparing to extend his system on to Florida, leaving Charleston out in the cold, so far as through travel is concerned. From an interview in the News & Courier we condense the following statements:

"It is well known that the Robinson system, or what is sometimes called the Roanoke & Seaboard Air Line, is now in operation from Portsmouth on the coast of Virginia to Weldon, N. C., thence to Gaston and Raleigh in the same State. It is also in operation to Hamlet in North Carolina, and from there will go to Cheraw. It is a good system of railroads, and there is not a single debt owed by it, and no interest-drawing profit-eating bonds are due or are likely to be due by the road. It is under excellent management, and is perhaps the best paying road in the South. It is a natural competitor of the Richmond & Danville system, and now wishes to become a competitor of the Atlantic Coast Line, and if I know anything it will succeed in its project in the very near future. With the Robinson system built to Cheraw, which is in easy reach of the terminus of the Eutawville Railroad at Sumter, the road between these places is sure to be built. It is but a short distance and the syndicate has ample means to build the extension. The Eutawville Road will be completed to Sumter in a very short while, if I may be permitted to judge by the very large number of steel rails that have passed through here in the past month for the road and are now going through every day. It will be finished soon, and then the extension from Sumter to Cheraw will be built at once.

When the system is completed from Portsmouth to Peggall's, and thence to Yemassee, what is there to hinder the railroad from being extended to some point on the Savannah river? There it will meet a charter from Georgia, and through that State it will be built at a rapid rate. And what's to hinder its completion to St. Augustine, or perhaps to Tampa? It is very easy to make the charter in South Carolina fit the scheme, and I am as confident that I am correct in my views as I am that water is wet. There is nothing to hinder the completion of the road if Mr. Robinson or his associates desire it. They have plenty of money; in fact, it is well known that the system borrowed easily five million dollars lately."

The future will show whether these predictions are correct or not.

BRANCH RAILROAD TO BE BUILT.—BALTIMORE, Md., Sept. 10, 1889.—Branch of Maryland Central Railway from Belair to Clayton, Md., on Philadelphia Division Baltimore & Ohio, is about to be let on contract. Right of way has been secured, excepting in a few instances. Road is to be standard gauge. C. F. KERCHNER.

DUMMY RAILROAD—AUGUSTA, GA., Sept. 12, 1889.—We have received our charter for the Richmond County Belt Line Railroad, and are now getting up our subscribers preparatory to building and equipping to miles of road, and expect to begin work soon. C. A. ROBBE.

Our Great Trades Journal.

The MANUFACTURERS' RECORD, of Baltimore, came to us yesterday in a new and attractive dress of beautiful type and showing decided improvement in its general make up. In keeping with the progress element in which the MANUFACTURERS' RECORD sweeps, it has also taken a step forward by adding a railroad department, and actually promises to add other features at an early day. The South already has good cause to be proud of this excellent enterprising trades journal and has every reason to be under obligations to it for the great work it is achieving for us. Week after week its columns run over with editorials urging the South on to greater industrial development, and in every issue its pages tell the story of the wonderful progress now going on in our part of this great country. To us it is more interesting than anything that a romancist could conceive, and every week when it comes we revel in its contents burdened as they are with mention of all the new industries on foot and projected in the several Southern States. North Carolina has always got a prominent place in the picture, and Wilmington especially is favored with conspicuous notice from time to time. The MANUFACTURERS' RECORD is certainly doing a great work for the South, and every progressive man among us should not fail to read it.—Wilmington (N. C.) Messenger.

CHAIR AND SHUTTLE FACTORY—RAMSEUR, N. C., September 7, 1889.—I will organize a company to manufacture chairs and shuttles. Will buy handle lathe, swing saw, band saw, planer and matcher, and machinery for manufacturing shuttles. I am now manufacturing chairs. A. W. E. COPEE.

\$10,000 FOR TERMINAL FACILITIES—ATLANTA, GA., Sept. 11, 1889.—We expect to issue \$100,000 bonds for the purpose of building depots, etc., and we will issue new bonds to take the place of the old ones at \$6,000 per mile, placing first mortgage bonds \$7,000 per mile, to pay our entire indebtedness. We expect to enter the union passenger depot to-day with our trains; if we do, it will place our road on an equal footing with any other road. R. F. MADDOX, Pres. Atlanta & Florida Railroad.

PROJECTED RAILROAD—ABBEVILLE, GA., Sept. 14, 1889.—We have a charter to build a railroad from Abbeville to Waycross, a distance of 80 miles. We will build the road very soon. J. D. MAYNARD & CO.

F. C. SMITH has been appointed master mechanic of the Queen & Crescent shops at Chattanooga, vice J. H. McGill.

PROPOSALS.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 26th day of September, 1889, for all the labor and materials required to complete the approaches to the United States Courthouse, Post-office, &c., building at Louisville, Ky., in accordance with the drawing and specification, copies of which may be had on application at this office or the office of the Superintendent. Each bid must be accompanied by a certified check for \$200. JAS. H. WINDKIM, Supervising Architect. September 5th, 1889.

SEALED PROPOSALS will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 21st day of October, 1889, for the labor and materials required in the erection and completion of the United States Courthouse, Post-office, &c., at Charlotte, North Carolina (heating apparatus, plumbing and approaches not included), in accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent. Each bid must be accompanied by a certified check for \$500. JAS. H. WINDKIM, Supervising Architect. September 7, 1889.

PROPOSALS FOR PROVISIONS FOR NAVY YARD, NEW YORK. September 13, 1889.—Sealed proposals, endorsed "Proposals for Provisions, to be opened October 8, 1889," will be received at the Bureau of Provisions and Clothing, Navy Department, Washington, D. C., until 12 o'clock noon, October 8, 1889, and publicly opened immediately thereafter, to furnish and deliver, at the Navy Yard, Brooklyn, New York, a supply of provisions, consisting of wheat flour, salt pork, beans, salt beef, rice, butter, roast beef, canned mutton, canned corn beef, brawn, ham, bacon, sausage, fish, tea, sugar, pickles, molasses, and vinegar. The articles must conform to the Navy standard and pass the usual naval inspection. Tie bids decided by lot. Blank forms of offer and specifications for the several articles required can be obtained upon application to the Commandant of the New York Navy Yard or to the Bureau. Applicants for specifications must designate the particular article for which the same are required. The Department reserves the right to reject any bid not deemed advantageous to the Government. JAMES FULTON, Paymaster General, U. S. Navy.

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WANTED A BRASS MOULDER.—Must be first-class on railroad and general work. State wages expected and full particulars. H. & McC., 239 Marietta Street, Atlanta, Ga.

WANTED.—A first-class pattern maker. A good workman can secure a permanent situation and good wages paid weekly by addressing GEO. PEACOCK, Selma, Ala.

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WANTED.—A competent man of large experience to act as foreman of a Spoke & Handle Factory, located near the city of Charleston, S. C., in a peculiarly healthy locality. A good salary will be paid and work guaranteed during winter and spring months. Address PHENIX SPOKE & HANDLE CO., Charleston, S. C. References required.

WANTED.—Good men to fill the positions of Secretary or Book-keeper, Salesman and Foreman in a first-class store Co. to be located in the center of the great iron region of Alabama. Must have some money to invest, and furnish satisfactory references. For further information address "MANUFACTURER," P. O. Box 379, Birmingham, Ala., with full address.

A SYNDICATE OF NEW ENGLAND CAPITALISTS now importing China-Grass (Ramie) in large quantities, desire to know if there is any Ramie now being grown in the States, or if there is likely to be in the near future sufficient to satisfy even a small demand. Preparation of the fibre need not be considered. The CROP BEFORE CUTTING is wanted. Address CHINA-GRASS, care of Manufacturers' Record.

A METALLURGICAL ENGINEER, about to take a trip through the South, would like to earn his expenses. Could report on engineering subjects. Newspaper correspondence or the introduction of engineering novelties undertaken.

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Care of Manufacturers' Record.

THE OWNERS OF A PATENT SPARK EXTINGUISHER desire a party with money to push sales. It is a perfect success, designed principally for agricultural engines. Small, handy, easily adjusted and so light that a canvasser can carry it in a buggy. Bold to limited extent with success last fall, but have not the money to carry on the business largely. Pays an immense profit and presents rare opportunity for moderate amount of money. The season in the cotton belt is about at hand and almost any territory can be secured. Would prefer giving an interest in profits but would sell also. Address INVENTOR, P. O. Drawer 61, Yorkville, S. C.

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Freight on output to market \$2.50 to \$3.00.

Also parties with same to make Charcoal Blooms.
Cost of Blooms \$22 per ton.
Cost of Charcoal 4 1/2 to 5 cents per bushel of 24.80 to inches.

By burning in improved kilns and saving bi-products the charcoal can be had as a bi-product itself.

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Managing Director, BLACKSBURG, S. C.
OR SEE
WM. M. ELLICOTT & SONS, Baltimore, Md.

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Lots within the incorporate limits of the town of Darlington, and fine farming lands adjacent, for sale. Railroad facilities good. Fine graded school in town. For further particulars apply to J. J. WARD, President and Treasurer of Darlington Land Improvement Co., Darlington, S. C.

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latest improved machinery, consisting of Top flat, Wellman stripper, 36-inch Cards, made by Whitin, and Whitin spinning frames 13½ in. ring, part Rabbeth spindles. Has been standing since July, is in first-rate condition, and one of the best plants in the United States. Will be sold very low. For particulars apply to

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In the beautiful city of Augusta, "KNOWN AS THE LOWELL OF THE SOUTH," a Cotton Mill of 150 Looms with all necessary Machinery and Buildings for the manufacture of Colored Cotton Goods.

Twenty-five Acres of Land and Operatives Houses. The Finest Water Power on the famous Augusta Canal.

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STEWART PHINIZY,
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SALE OF**Tuskaloosa Cotton Mills.**

On account of the death of my son, Arthur Fitts, who was superintendent and one of the principal owners, the Tuskaloosa Cotton Mills will be sold at public outcry in front of the court house in the city of Tuskaloosa, between the usual hours of sale on Monday, the 7th day of October next.

This mill has 172 Thos. Woods Looms, 12 Quilling Frames, and all necessary machinery, with a well-appointed Dye House and Drying Room, by which its widely-known Black Warrior Plaids were manufactured. It has 125 horse-power Engine, made by Wm. Wright in 1883, with two first-class fine, steel Boilers, made by Webb & Co in 1885. The buildings cost over \$25,000, situated on five lots, in the city of Tuskaloosa, and the entire property is exempt from municipal taxes for ten years.

During the eight years it was operated by me it paid the stockholders 101 per cent., and added machinery nearly doubling its capacity.

Parties wishing to purchase are requested to examine the property, and if desired, will be permitted to see the books showing the expenses and profits during the nine years which it has been successfully operated.

TERMS of SALE.

One-third cash; balance in notes, with interest payable in one and two years, secured by a mortgage on the property, which is to be insured by the purchaser for the amount of the notes, and the policies assigned to J. H. Fitts, Trustee.

J. H. FITTS, President,
Tuskaloosa, Ala.

ELIAS EDMONDS,
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Makes the Litigation of Land Titles a specialty. Will also Lend Money for non-residents upon the best real estate security.

\$1,000 Bonus.**FREE SITES!**

TO MAKE A

Profitable Investment,

Correspond with Secretary New Berne Board of Trade.

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IN RELATION TO THE

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—AND—

Ample Inducements

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Factories where they will pay.

We are in the center of a most magnificent timber region. Wood of all kinds in abundance, and the best facilities for transporting to the mill and from the mill to market.

We are very anxious to develop our section by establishing factories. We have everything except capital, and we will make it pay capital to come to us.

We know that people flock to the booming sections, but still we do not want a boom, but a good, substantial and steady growth, such as we have had for the past ten years. The point is now reached with us that we can go no farther without capital to assist, and it will pay capital to investigate what we have to offer.

New Berne is now offering every inducement possible to aid manufacturing investors who will establish enterprises adapted to the natural advantages of this section. Address

Secretary New Berne Board of Trade

Charlottesville, Va.

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AND

Liberal Inducements

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Railroad Facilities, Cheap Rates and Rapid Transportation to all Points Unexcelled. Perfect Climate. Unlimited Supply of Excellent Water. Gas, Electricity and Street Railway. Free Schools and Churches. Different lines of Manufacturing Enterprises already in successful operation here. A Live and Growing Place.

Home capital will join in the establishment and operation of factories.

Come and see, or write to

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—FOR—

**Manufacturing Sites
IN THE SOUTH.**

The most desirable locations in the South for manufacturing wagons, stoves, agricultural implements, furniture, or for foundries, machine shops, rolling mills and nail works, glass works, cotton or woolen mills, are to be found in Virginia along the line of the Norfolk & Western Railroad from Norfolk to Bristol, and upon its branch lines. Hard wood of every variety; cheap iron from the furnaces at Lynchburg, Roanoke, Radford, (to be built in 1889,) Pulaski and Ivanhoe; cheap coal and coke from the celebrated Pocahontas Flat Top field; glass sand from Tazewell county; cotton from the markets of the Southern States, and wool from all the Western and Southwestern States and Territories, at advantageous freight rates. Favorable freight rates made upon raw materials to all factories established upon its line, as well as to points in the United States and Territories upon the manufactured articles.

Those seeking new fields for manufacturing establishments should not fail to investigate the wonderful development in iron, coal and coke industries that has been made within the past five years along the line of the Norfolk & Western Railroad, and the advantages offered by the State of Virginia in the supply of cheap raw materials; by the Norfolk & Western Railroad in the matter of freight facilities and rates upon raw materials, and for reaching home, far distant and foreign markets, and by the cities and towns along its line in the way of advantageous sites at moderate cost. Many of the cities and towns exempt manufacturing establishments from taxation for a series of years.

For further information as to freight rates and sources of supply of raw materials, apply to A. POPE, General Freight Agent, Roanoke, Va., or to

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is situated in Sumter county, midway between Florence and Columbia—40 miles from each—95 miles from Charleston, 125 from Augusta, Ga., and 136 from Wilmington, N. C., in the heart of an

EXCELLENT AGRICULTURAL COUNTRY.

It is on the Wilmington, Columbia & Augusta Railroad, and is the terminus of the Central of South Carolina as well as present terminus of the Sumterville Railroad, which is in course of construction to connect with railroads from Norfolk, with prospects of another in the near future.

It has a rapidly-increasing population, which at present numbers about 4,000.

ITS HEALTH IS UNSURPASSED

and it is one of the finest locations in the South for a

Winter Resort

for those seeking refuge from the cold blasts of the North.

A \$50,000 HOTEL is now under discussion, and any reliable hotel man who would like to engage in the undertaking can learn of something to his advantage by addressing Mayor Mood.

ICE FACTORY

is wanted; an Electric-Light Plant is now being put in, and Water Works are in progress.

Those seeking locations for

HOMES

or business will do well to correspond with the people of Sumter.

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JAS. M. ALLEN, Secretary, Waterloo, Ala.

Capital Stock \$200,000.

THE

Waterloo Land, Mining & Mfg. Co.

of Waterloo, Lauderdale Co., Ala.

will encourage the location of manufacturing and industrial enterprises in the town of Waterloo by donations of town lots, mineral and timber lands, and stock of the company. Persons who contemplate engaging in enterprises of this character in North Alabama are requested to consider the advantages, present and prospective, of this point before deciding to locate elsewhere. Waterloo is situated on the north bank of the Tennessee river, below Colbert Shoals and consequently at the head of summer navigation on said river. During low-water stage light draft steamers run from Waterloo to Florence, Sheffield and other points above the shoals, freight being transferred at Waterloo. At this season goods may be billed from St. Louis, Cincinnati, Louisville, Evansville and all Western river cities to Waterloo cheaper than to any other town in Alabama. Chickasaw excepted. Waterloo is in the heart of the mineral belt, the immense beds of iron ore of Wayne and Lauderdale Counties lying in close proximity (8 to 10 miles). Limestone, silica and kaolin are abundant and close. The largest area of virgin forest in North Alabama lies in sight. The Land Company owns large bodies of this, together with many valuable town lots. The water supply is abundant and pure. Scores of springs bubble up within the town limits and the limpid waters of Second Creek wash the eastern border. The health of the community is unexcelled and the cost of living cheap. This is the largest shipping point for tan bark in the state. Present price of bark at landing \$4.50 per cord. Special facilities for tanning leather. The Land Company will donate a large body of fine timber and mineral land in a block to secure the construction of a railroad, north or east from Waterloo, such a road being needed in connection with the unequalled facilities of water transportation enjoyed by the town. Liberal aid will be given to persons who will locate industries here that give employment to labor and add value to raw material.

No matter what you intend to manufacture, consult the Waterloo Land, Mining & Manufacturing Co. and learn what facilities for the prosecution of your business the place enjoys and what inducements will be offered you to come. All questions truthfully and fairly answered.

For further information consult the President, Secretary or Hon. Hiram Richardson, Vice-President, Waterloo, Ala.

Eastern Lumber Markets.

[Spec. correspondance MANUFACTURERS' RECORD.]
NEW YORK, September 17, 1889.

The fall business has set in with renewed vigor in Boston, New York and Philadelphia. Our visitors from Western markets are hurrying through their canvass in haste to return. Building requirements are very heavy, and many of the buyers are purchasing in a retail way. Remarkably little wholesaling has been done, but an immense quantity of lumber is changing hands. Business of all kinds is good. Builders are securing promises of considerable inside work. Country dealers are not rushing into market, but are quietly picking up here and there and now and then what they think suits them. This policy always keeps prices low, and often gives color to the chronic complaint that trade is dull. New England town and city dealers are about placing some large winter orders, which will have the effect of clearing out certain retail yards, who have a greater or less monopoly of that trade.

Salesmen are making their final tour for the season, and already the larger companies here are in receipt of good orders. There is one difficulty salesmen and dealers have to meet, and that is, the repeated offerings of lumber from consignors who hope by direct offerings to make the middleman's profit. Many have tried that plan and have discontinued it. It is better to call in a doctor when you are sick than to prescribe for yourself out of Doctor Gunn. Our commission men have earned their place, and consignors and manufacturers cannot get along without them.

We are able to report some interesting facts direct from the books of the leading dealers, especially in Southern woods. Yellow pine sales to date, including, of course, out of town shipments, are just about 25 per cent. greater than last year. At Philadelphia the excess is not quite so great, and at Boston there has been an increase, but no figures can be given. As to prices, it is only the smaller buyers that have been obliged to pay irregular prices. The larger distributors here have been purchasing at even rates all along. The arrivals are heavy, and our yards will be piled full by the middle of next month. The even character of the stock arriving helps to keep prices steady. To know what mill a product comes from is to know what kind of lumber it is. A good deal of stuff has been shipped this fall to Long Island and into markets within a radius of fifty miles. Some heavy winter building operations will soon be heard of. The Pennsylvania Co. have been heavy buyers, and the New York Central and another road have lately put themselves in possession of a large quantity of lumber. To us it looks as though railroad companies and manufacturers intended to have a good supply of all kinds of Southern woods for the opening of next season. The undertone of our Northeastern markets is strong, and every one looks for great things next year. Car orders for yellow pine are \$22.50, and heart-faced boards \$20.50@21; common sidings \$13.50, and flooring \$21.50. For export for South American ports f. o. b. \$14; to West Indies, \$13.50.

The North Carolina pine people are still working this and adjoining markets earnestly. The stocks of both rough and dressed have been lately increased considerably, but it sells almost as fast as it comes, and there is very little shading in prices. The shippers have been urged to utmost promptness in deliveries, and a large stock is now on its way, or will be as soon as loaded. We are hearing of the losses by the recent storm, but there is no convenient way of presenting the aggregate losses. Shippers are a little backward yet. North Carolina rough by water, \$21 for 1-inch stock; No. 1 1-inch siding, \$18;

No. 2, \$16; dressed stuff by car, 1-inch flooring, No. 1, \$22.50; No. 2, \$19; No. 3, \$16.50 to \$17; rift flooring, 1-inch, No. 1, \$30; 1/2-inch, \$25; ceiling, No. 1, 1-inch, \$24; 1/2-inch, \$16.50. From these figures a fair idea can be drawn as to the rest of the market.

White pine is moving quietly at steady prices. Some large bills have been purchased. Uppers, 1-inch, \$47; selects, \$41.50; fine common, 1-inch, \$36 to \$38; cutting up, \$28 to \$30; common, \$23 to \$24; box, \$15; ceiling, \$40.

Hemlock joists sell well at \$12; boards, \$12.50. Mills busy. Water in the creeks and in the clouds abundant.

The country trade continues to absorb shingles and lath.

The hardwoods are going to be held firmly after all. A few dealers who sell rare woods have met with good sales. Users of elm, gum, black ash and a few other such woods have run their limited stocks down lately. Sycamore is cheap.

White oak is strong, and as usual, quarter-sawn is selling well.

Cherry is rather scarce, the retailers say, but the wholesalers are well supplied, though they are holding prices high. Machine and wagon stuff is selling well.

Good thick ash sells well. Carriage builders are in the market.

Walnut is slow. Poplar holds its own.

The fall meeting of the Lumber Trade Association was held to-day.

The retail trade at Cincinnati is picking up, especially in cabinet woods. The Louisville market is quiet.

The Buffalo markets are very active, preparatory to an expected early winter. In Western lumber markets no weakening of values is probable.

Railroad car shops are everywhere pretty well supplied with orders.

The Chicago lumbermen are determined to have the World's Fair held there.

W. EDWIN PEREGOY & CO.

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Yellow Pine Flooring and Ceiling,

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AND BENCH VISES.

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Sold on Commission.

Agencies in New York, Chicago, Boston
and London.

We call the attention of owners of large tracts
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Company. Address

LEWIS T. BAXTER,
Secretary and Treasurer.
Nashville, Tenn.

References: The bankers and business men of
Nashville, Tenn.

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The Kyle Lumber Co., Gadsden, Ala., offer their Mill and Timber Lands and complete outfit. Mill turning out thirty thousand feet a day, with Dry Kiln, Planing Mill, Logging Railroad and 20,000,000 of Long Leaf Pine. The Elliott Car Co. take three-fourths of product. Mill will be sold for small cash payment and balance in lumber, \$1,000 a month. Mill has never made less than \$15,000 a year. Is located in city on river with railroad connections. For further information apply to
R. B. KYLE, President.



\$80 will buy the best BAND
SAW in the world. \$185
will buy our new PATENT
BAND RESAWING MA-
CHINE. \$100 will buy the
BEST AUTOMATIC RIP
SAWING MACHINE, weatherboarding
attachments included, and one SAW.
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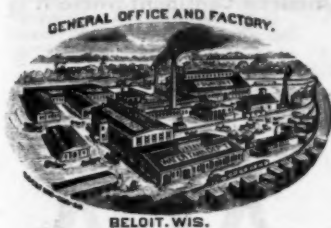
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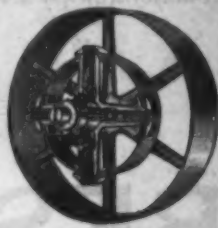
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DEAR SIR: The Clutch Pulley (diam. 106 in., face 31 in.) works satisfactorily in every particular, and is a great convenience. We have two, and can stop either the main saws or the gang edger, or both whenever desired, without stopping the engines.
Yours respectfully,
Yesler Wood, Coal & Lumber Co.,
J. D. Lowman, Sec'y.

St. JOSEPH, MO., June 24, 1899.
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GENTLEMEN: The Clutch Pulley reached us all right; it works to a charm. If we had put it on last April, in place of one we had, we should now be ahead over \$400, which we have lost in time and breakage. Yours,
The Brick & Terra Cotta Mfg. Co.,
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ECLIPSE WIND ENGINE CO., - Beloit, Wis.

Send for July, 1889 catalogue, and see where and by whom they are used.



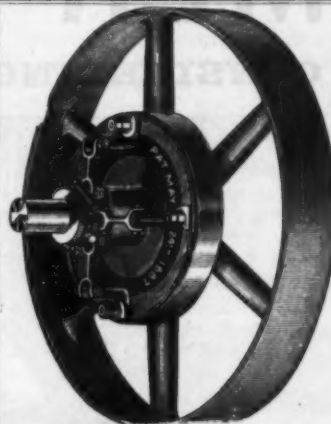
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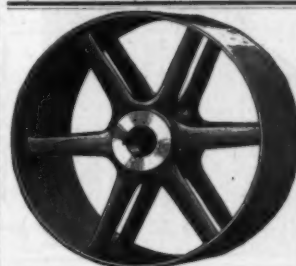
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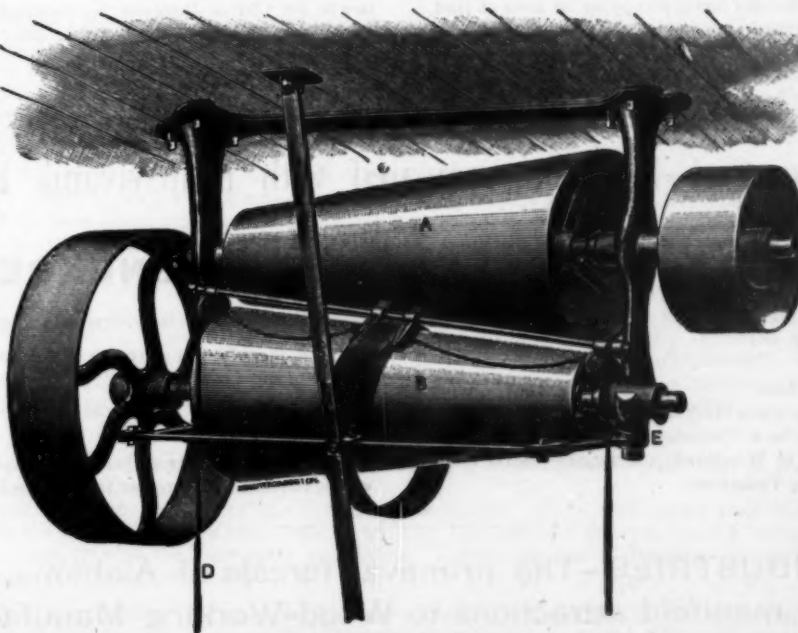
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85 WATER STREET, BOSTON, MASS.

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BUSINESS POINTS

ABOUT

BESSEMER CITY, ALA.

WORTH CONSIDERING BY BUSINESS MEN.

COTTON MANUFACTURING.

With the Cotton growing near the mill; at the present cost of spindles in position; spacious sites costing nothing; coal delivered to mills at \$1.25 per ton; modern steam machinery with its minimum consumption of fuel, Bessemer offers marked advantages.



The Land Company offers on leases for five or ten years, with very liberal terms, One Hundred Farms, 5, 10 and 15 Acres each, and will erect cottages and put up fencing; but only to parties who have, by experience, been successful in these branches of business. Don't want any inexperienced experimenters on any terms.

100 Fruit, Truck and Dairy Farms.

Bessemer's Iron Foundations.

First.—The DeBardeleben Coal & Iron Company—Two furnaces in blast; two batteries of 170 coke ovens each—340. Extensive coal and iron mines, limestone rock, etc., in active operation. Furnaces situated within the city limits, occupying 160 acres of land—enough for multiplied extensions. Average output 225 tons daily.

Second.—The Bessemer Steel & Iron Company—Two furnaces go in blast December, 1889; two batteries of 200 coke ovens each. Extensive coal and iron mines, limestone rock, etc., in active operation. Furnaces situated within the city limits, occupying 100 acres of land—enough for multiplied extensions. Average output 225 tons daily.

Third.—The Little Belle Iron Company—To go in blast December, 1889. One charcoal furnace, situated within the city limits, occupying 50 acres of land, enough for multiplied extensions. Average output 60 tons daily.

Fourth.—The Bessemer Rolling Mills—Situated within the city limits, occupying 13 acres of land. When running full works 700 hands. One hundred tons possible daily output.

Fifth.—In addition to the coal and iron mines above referred to, in connection with the five furnaces, these proprietors own the **MAGNETIC ORE LAND COMPANY**. The total coal, iron and limestone lands owned by these corporations amount to over

200,000 ACRES.

The **EARLIEST SELECTED** and choicest lands in Alabama, all directly tributary to the City of Bessemer, representing, with furnaces, rolling mills, etc., an aggregate of \$8,000,000, not including other lines of business.

Iron Manufacturers in Bessemer will have a direct advantage of \$2.50 to \$3 per ton on the cost of Pig Iron, compared with Pennsylvania Prices.

TRANSPORTATION EVERYWHERE UNEXCELLED.

The Queen & Crescent Line—Cincinnati to New Orleans.

The Louisville & Nashville Lines.

The Georgia Pacific and Danville Lines.

The Kansas City, Memphis & Birmingham Line.

The Birmingham & Bessemer Railroad runs trains every hour to Birmingham.

The Bessemer & Huntsville is completed as far as Chepultepec.

The Bessemer & Tuscaloosa is completed to Woodstock, a distance of thirty miles, lacking only eighteen miles of reaching Tuscaloosa.

The Bessemer & Selma has been surveyed and grading will soon commence.

The Mobile & Bessemer, an extension of the East Tennessee, Virginia & Georgia, is in process of rapid construction.

The Sheffield & Bessemer is projected to Bessemer. It is now built as far as Jasper, forty miles northwest.

The Birmingham, Powderly & Bessemer Street Railway, Bessemer to Birmingham, will be running by November 1st, half the line being now graded.

WOOD-WORKING INDUSTRIES—The primeval forests of Alabama, tributary to Bessemer, offer manifold attractions to Wood-Working Manufacturers.

CORRESPONDENCE SOLICITED. For particular information as to price of lots, manufacturing sites and inducements to establishing plants in this unrivalled locality, address

H. M. McNUTT, Secretary,

W. H. Hartman
President

SOME FACTS ABOUT FLORENCE, ALA.

Florence is in North Alabama, near the Tennessee line, on the Tennessee river, which is navigable here for large steamers. It is on the Memphis & Charleston Railroad, and the Nashville & Florence branch of the Louisville & Nashville Road.

There are many other places in the South possessing the advantages of a good climate, healthfulness, natural resources and manufacturing capabilities more happily combined and in a higher degree than can be found in any other part of the country. It is believed, however, that at no point in the South, and hence nowhere in America can there be found an aggregate of so many unsurpassed advantages and attractions as exist at Florence.

Florence can make iron as cheaply as any place in Alabama. It has facilities for the manufacture also of cotton goods equal to those of any other place. Anything that uses wood as a raw material can be made here at as low a cost as anywhere in the South.

Thousands of acres of iron ore of a high grade within a few miles of Florence are owned by Florence companies. Limestone is quarried within the town limits. There is enough of it to last for ages.

Cotton mills would get a large part of their supply from the country around Florence. Cypress creek furnishes water power and mill sites enough to make Florence the Lowell of the South.

North of Florence, and up the Tennessee river, there are large areas of timber, embracing a wide variety of hardwoods—forests that the ax has never touched.

Besides its industrial possibilities, Florence is a point of great commercial importance, and could be made the center of an enormous mercantile business. It has the advantage of both rail and river transportation and of competing railroads. Certain railroad movements are in progress now that will give it direct communication in every direction and by different lines.

Florence is surrounded by a wide extent of fertile and productive country, as well adapted for farming, stock raising, fruit growing, truck farming, dairying, &c, as any in the world. Further, it has a climate that is delightful the year round. Its health record cannot be surpassed. In fact, people who live here enjoy a remarkable exemption from ailments of every sort. It has an abundance of the purest water.

For beauty of location Florence is without a peer. The Tennessee river at this point is as romantic and beautiful as the Hudson. The rolling character of the country, the slopes and hills and alternating valleys furnish a picture to charm an artist's eye. The lovely Cypress creek, a deep and rapid stream emptying into the river just below the town, presents at every turn in its tortuous course a scene of entrancing beauty. The views from some of the higher hills are as fair as the eyes of man ever rested on.

Florence is making more rapid progress, proportionately, than any other town in America. This is a strong statement but it is true. And its growth is on a solid and permanent basis.

Florence is not undergoing any wild real estate boom. Its managers are not seeking to advance real estate prices. It is not their plan to get a quick return for the money they have invested, by the rapid sale of lots at unnatural prices. It is their aim to first build up a town, to locate factories and secure a permanent population, when land will have an actual value and sell at prices from which there will not be a subsequent disastrous reaction. At present real estate is much lower in price than in any other town in the South that has made half the progress Florence has made.

Since the first of September, 1888, over 25 industries have been located at Florence, with an aggregate cash capital exceeding \$2,000,000. This remarkable growth is the result of efforts to induce people to simply investigate the attractions of Florence. Investigation and comparison with other places, on the part of any who are looking for a place in the South to locate, will in nearly every case result in the selection of Florence.

The following are some of the industries in Florence. Some of these are in operation; others are nearly ready for work and others have but recently commenced work on their buildings: A furnace about ready to go into blast, and another partly constructed; a stove factory; a hardware company, with a capital of \$300,000 to manufacture fine building hardware, &c.; a wagon factory, with capital of \$150,000; an agricultural implement works; a handle factory; a woodenware factory; a sash, door and blind factory; a cedar bucket factory; a pump factory; planing mills; a factory to make wooden butter plates such as grocers use; a flour mill; a cotton mill; a jeans factory; a gingham factory; a woolen mill; a cotton gin; a marble company; a roofing and paint company; a shoe factory; a suspender factory; a compress, packet and ferry company; three building and loan companies; a canning factory; several brick factories; a dummy railroad company, and several other enterprises.

The aggregate capital of the industrial, mercantile and development enterprises in Florence exceeds \$15,000,000.

A year ago the population of Florence was 2,000. It is now more than 8,000.

There are more than 1,100 carpenters at work in Florence and they can't build houses fast enough to keep up with the increase in population. Before the first of January next there will be 15,000 people living here.

Limited space allows here only the briefest summary of a very few of the more important facts about Florence. For more detailed information write to any of the following companies. Or better still, come down and see for yourself. Investigation is all that Florence asks or needs.

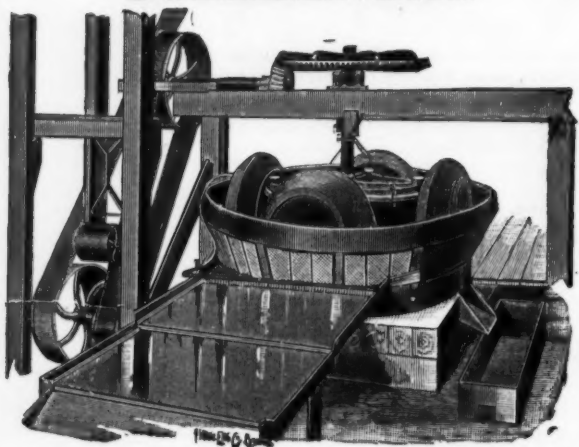
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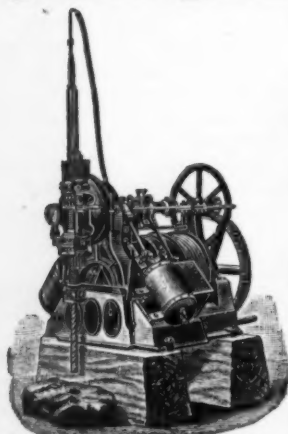
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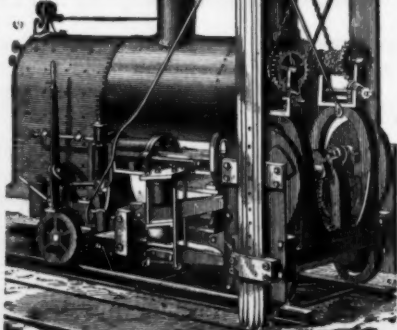
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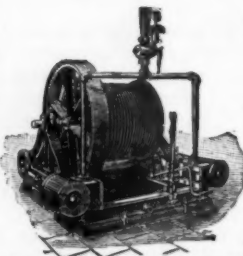
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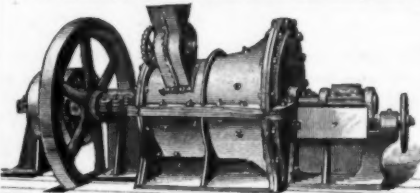
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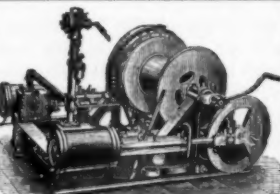
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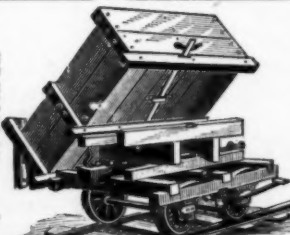
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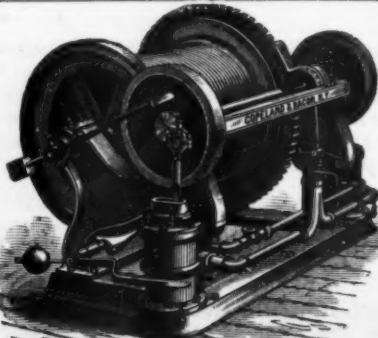


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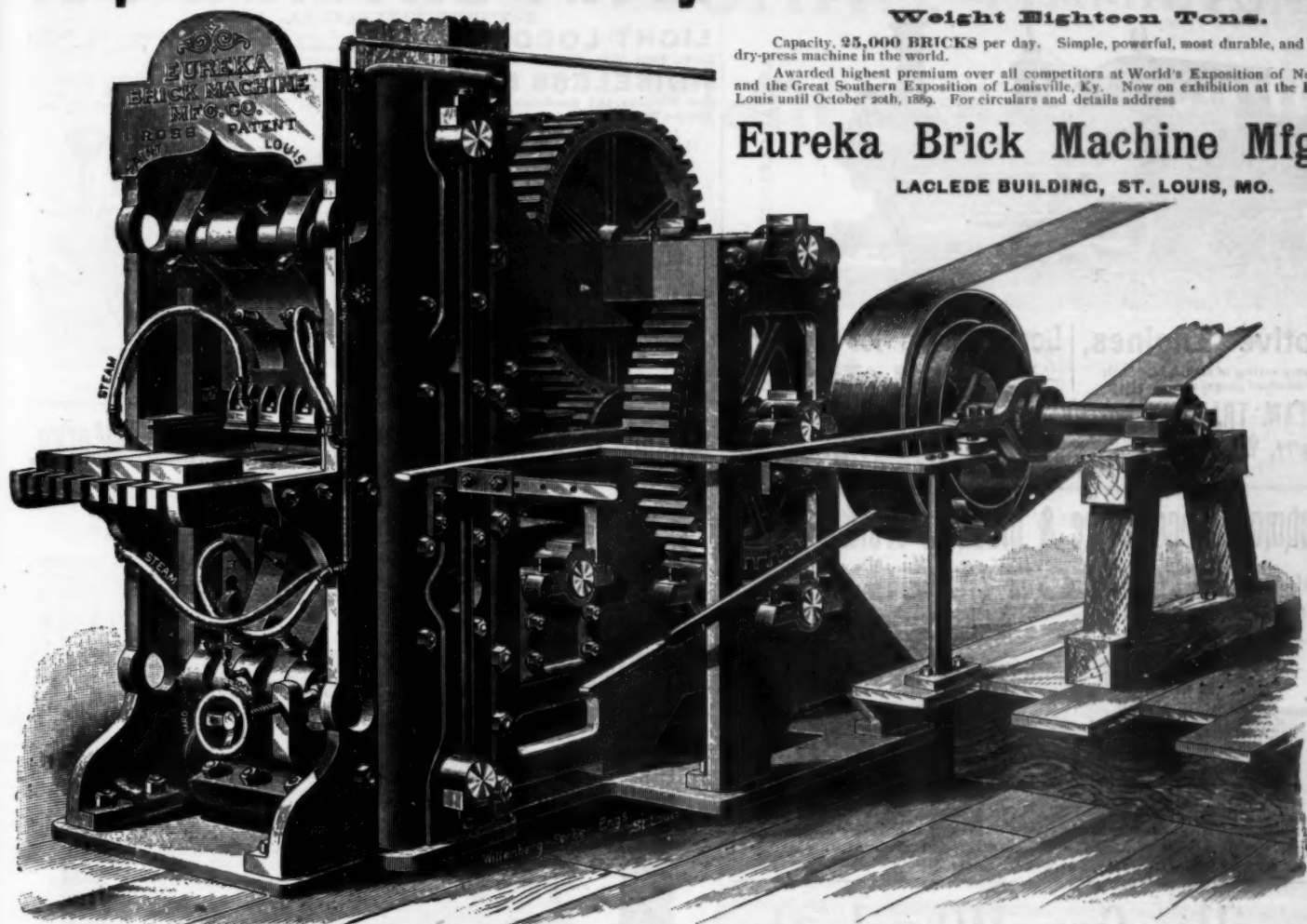
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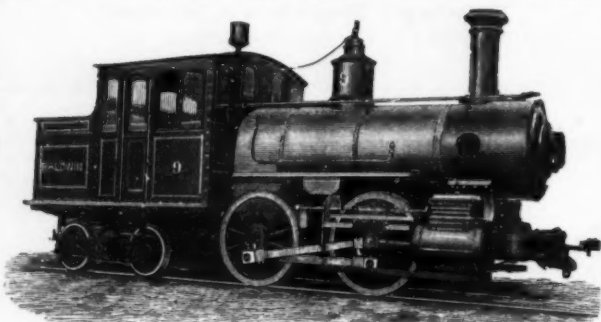
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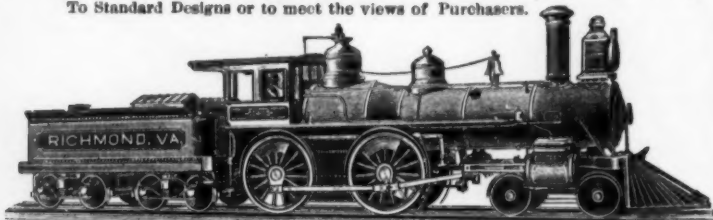
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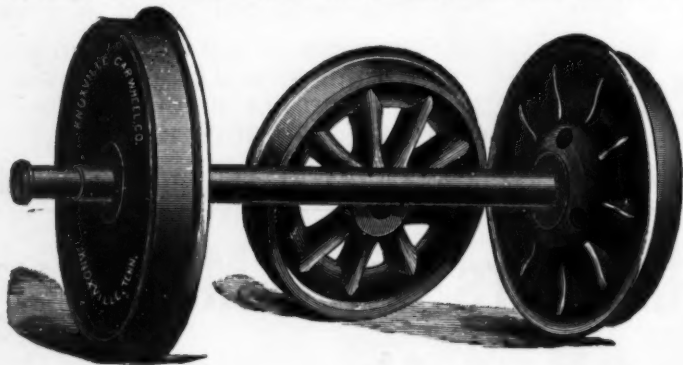
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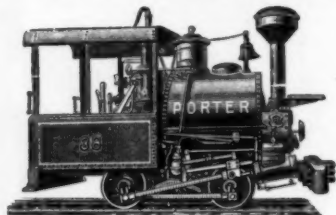
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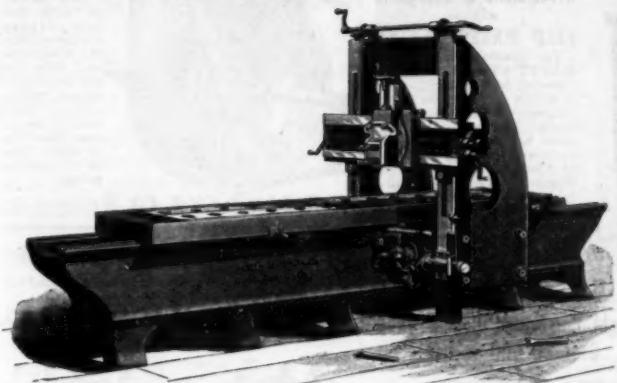
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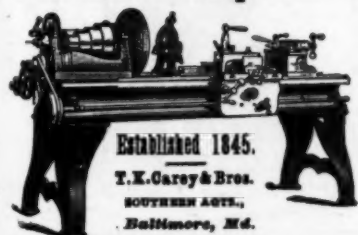
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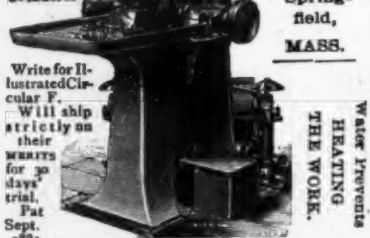
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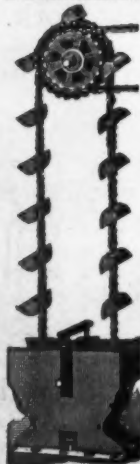


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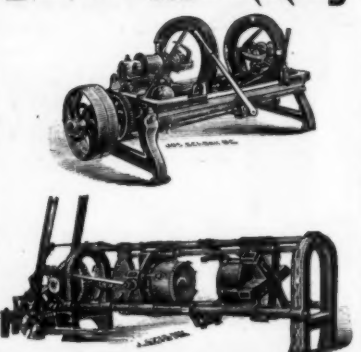
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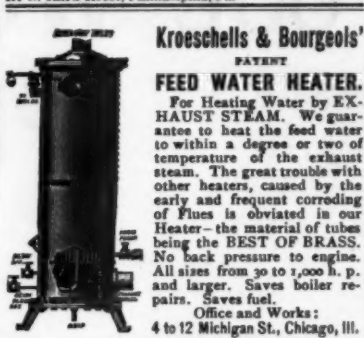
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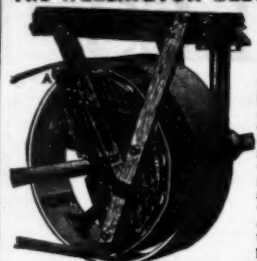
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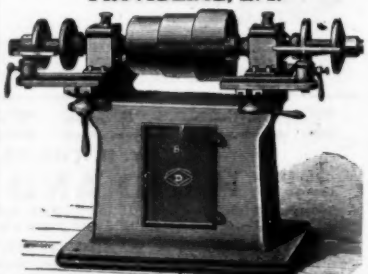
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TRADE NOTES.

THE Campbell & Zell Co., Aliceanna and Eden streets, Baltimore, have contracted to supply the United States Electric Light Co., of Washington, D. C., with one of Zell's improved patent safety boilers, 400 horse-power.

THE National Pulley Covering Co., of Baltimore, announces their removal to more commodious quarters at 23 South Charles street. This change has been made necessary by the steady growth of their business, their present quarters being too small to accommodate them.

AN excellent hotel, all furnished, in Rome, Ga.; one of the live and enterprising towns of the South, is advertised in another column to rent for the season of 1890 by Charles Harper. The hotel has 30 rooms and is conveniently located, both for restaurant business and as a railway eating-house. All particulars relating to this excellent opening can be had by applying to Mr. Harper.

"NOT WHAT WE SAY, BUT WHAT OTHERS SAY," is the title of a very neatly printed little pamphlet issued by the Joseph Dixon Crucible Co., of Jersey City, N. J. The pamphlet is made up, as its title indicates, of commendations of the smoke-stack and boiler-front paint for locomotive and steam-boat stacks, smoke-arches, ash-pans and other iron work. This paint is of silica-graphite and very durable, being unaffected by heat or cold, dampness, salt-air, rust, or even acids. Any information regarding this paint can be had by applying to the company, at Jersey City, N. J.

THE United States Wind Engine & Pump Co., of Batavia, Ills., has just issued its regular descriptive catalogue, the 26th edition, of its numerous specialties, including the Halladay standard pumping and geared windmills, the United States solid wheel windmills, I. X. L. iron feed mills, I. X. L. corn-shellers, I. X. L. stalk-cutters, horse-powers, jacks, standard haying tools, pumps, tank fixtures, and many other farm and labor-saving machines. All the advantages of the windmills and other products of the company are most elaborately set forth, and the economic working and simple construction of the machines are carefully explained. Numerous testimonials from all parts of the world, even from South Africa, show how universal the use of these windmills is, and how much patronage their good qualities have won for them.

BANKERS' DIRECTORY.—An invaluable book to concerns doing a business of any size is the Bankers' Directory and Collection Guide, issued by Bradford, Rhodes & Co., 78 William street, New York. It is a most conveniently bound and arranged book of 440 pages. It contains, besides a list of all the banks in the country and their offices, the bankers, brokers, loan and investment companies and all other concerns allied to the banking business throughout the United States and Canada. There is also a selected list of leading bank attorneys. A list is also given of towns having no banks, with directions where to send collections. As a sort of appendix is a digest of banking laws and customs. Every part of the book is very complete, and everything is brought down to July 20, 1889. As the book is issued twice a year it never falls behind the times. It is edited and compiled by experts. The fact that it is published at the office of Rhodes Banking Journal and of the Bankers' Reference Book is sufficient to guarantee its reliability and completeness. The price of the book is \$2, or when the index is cut on the edge of the leaves \$3, to be had on application to the publishers.

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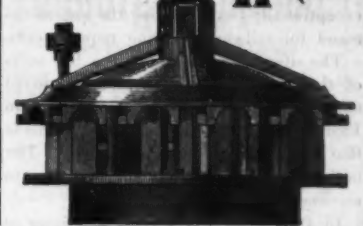


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The Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, September 18, 1889.

It is scarcely worth while to pay much attention just at this time to the intimations thrown out that iron and steel prices will advance 5 to 10 per cent. before the close of the year. Such predictions are quietly made, but it is hard to say whence they emanate, or whether those who make them have faith in their own predictions. It might be well, however, to take a bird's-eye view of the situation for a better understanding of the position of the iron trade generally. Freight rates have been advanced on nearly all of the railroads which haul the bulk of our iron and steel products; the higher rates have hardened prices, both at furnaces and points of delivery. The Southern furnaces are better sold up than they have been since iron was first made in the South. Pennsylvania and Ohio furnaces are also well sold up, and very little anxiety is manifested as to booking business for later than December delivery, although not a few contracts have been made which run through the winter. The users of pig iron, however, have bought largely ahead—sufficiently, at least, to cover the bulk of the business now in hand. Thus far the stimulus given to the iron trade this fall has not resulted in a greatly increased output. At the opening of the year the anthracite output was 38,726 tons per week; on July 1st the capacity of furnaces in blast had fallen to 34,142 tons, and on September 1st the 93 furnaces blowing have a capacity of 35,997 tons per week. On January 1st there were 157 bituminous and coke furnaces in blast, having a weekly capacity of 106,726 tons; latest returns show a falling off to 137 furnaces, with a weekly capacity of 99,720 tons. Statistics show that the furnace output is once more on the increase, and from information received from a variety of sources, it is quite evident that the production will be steadily augmented from now out, but to what extent is problematical.

Prices are very strong in all markets. Consumption is very likely to increase. The companies are anxious to secure better prices to cover the increase in freight rates and the increased cost of labor, and the higher prices of coal and coke. Coke will probably advance to \$1.50, and it is intimated that when the two great companies have divided the 14,000 Connellsville coke ovens between them they will advance prices to \$1.60. The anthracite coal managers have about given up the idea of selling coal at higher prices during the winter; at least, so it is given out. The coal barons will not willingly allow consumers to have coal at summer prices, however, and will watch their opportunity to give the market a twist when it is least expected.

Forge irons are selling in Northern markets at \$15 to \$15.50; No. 2 foundry, \$16 to \$17; No. 1, \$17 to \$18, with special brands 50 cents to \$1 higher. The demand for muck bars, skelp iron, steel billets, blooms and slabs is very active, and prices for steel billets have advanced as much as \$1 per ton per week for two weeks past for early delivery. The demand for steel in these shapes is unprecedented, and the rail mills having a portion of their capacity devoted to this class of work are able to report a very prosperous trade.

The output of steel rails is rather light, but the indications are that a heavy demand will soon set in. This statement, however, has been made very often; it is based on the announcement by financial managements of new railroad enterprises. Prices are quoted at \$30 in Western Pennsylvania; in Eastern Pennsylvania the bottom figure is given at \$28 for large lots; in Chicago, \$32 is quoted for standard sections.

All kinds of merchant steel are in very

good request because of the heavy demand for machinery, implements, boilers, engines, and all that class of products into which steel largely enters.

The manufacturers of track supplies are exceptionally busy, meeting the urgent demand for railway repairing requirements.

The situation of affairs in the bar mills of the country seems to have improved slightly within the past week, although in Eastern Pennsylvania complaint is made that orders are not quite so urgent. The mills generally are sold up from four to six weeks.

In Pittsburgh a very good condition of things is reported. Wrought iron pipe is especially active, and the mills are well supplied, with prospects of a large amount of work to come in at an early day. In Cincinnati the market is strong. Gray forge contracts have been placed for early winter delivery. There is also a heavy demand for No. 3 foundry. An advance of 25 cents per ton in crude iron is likely to take place within a week or two. Buyers are hastening to cover requirements up to the close of December.

At Louisville large buyers have been a little frightened by the advancing tendency, and are in a quandary whether to complete their purchases, or let the market have its way, in the hope that a reaction will set in. Plate, tank and structural iron orders are crowding in faster than they can be conveniently taken care of. As previously stated, bridge building will be very active. An immense amount of work on Western and Southern railroads is now in hand. The improving traffic and the better earnings of the leading railway systems is accepted as an assurance by iron and steel makers that the railroad managers of the country will be heavy buyers of material during the coming winter. The inference is a very safe one.

Chattanooga reports also point to stronger prices, but there is an indisposition among pig iron makers there to crowd prices up too rapidly. Fewer sales are being made for three months hence than were made two or three months ago. The bulk of business in Chattanooga and Birmingham is made up of small orders.

The stockholders of the Thomas Iron Co., of Pennsylvania, have decided to sell their property to a foreign syndicate for \$3,500,000; this does not include cash on hand or cash due, which amounts to \$1,700,000, making a total valuation for the plant and business of \$5,200,000; the company has bonds out for \$400,000, however, and this must be deducted. It is believed in iron trade circles that some other first-class iron properties will be called upon to name prices.

The commercial and financial situation at New York is all that could be desired. The bank statements show an increase of money, and bank loans show that the bankers are meeting the requirements of their customers without hesitancy. The action of the government is helping to strengthen confidence and facilitate commercial transactions. Both imports and exports are increasing; exports of wheat and corn will be greatly increased, as there is a heavy deficit in foreign countries.

HARDWARE.

The volume of business continues fair, and, in the face of an enormous output, stocks are steadily decreasing and raw material is advancing, in such a conservative manner, however, as to warrant a belief in the permanence of higher values and the consequent general satisfaction of all interested.

Since our last report there have been advances in picks and mattocks, wrought goods of all kinds, and former quotations on chains, bolts, nuts and other items of heavy hardware have been withdrawn pending the issue of new discount sheets, made

necessary by the present state of the iron market.

Some grades of iron over-top hook hames have advanced five to ten per cent., and the trade may expect similar changes in many other leading lines, which have long since ceased to afford legitimate profits to the manufacturers.

THE MANUFACTURERS' RECORD, of Baltimore, Md., appears this week in a brand new typographic outfit, but continues to "scrooge around" among the Southern industries as if not in the least concerned about its freshness or good looks. The MANUFACTURERS' RECORD is a hustler.—American Artisan, Chicago.

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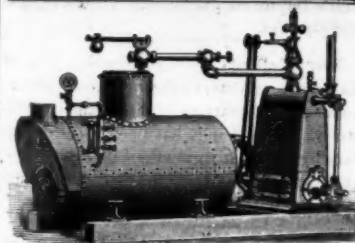
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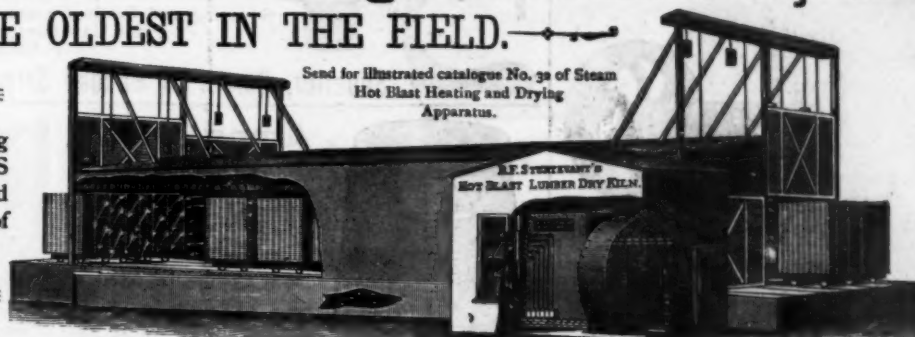
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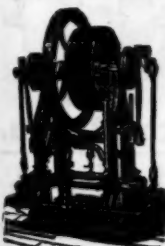
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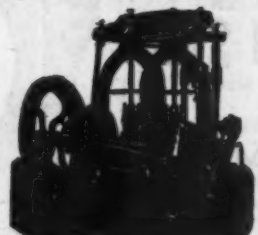
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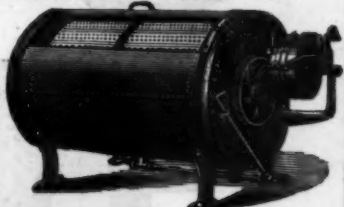
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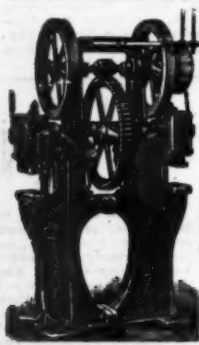
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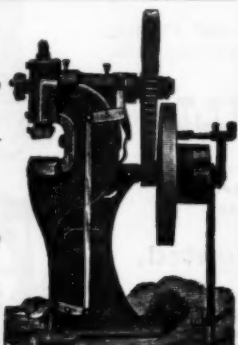
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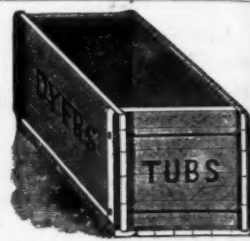
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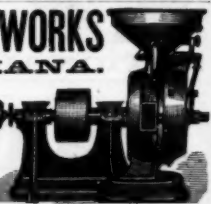
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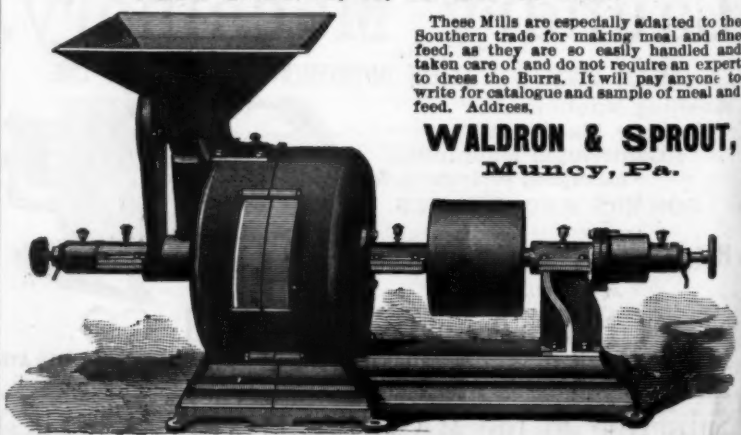
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No. 2 Four-Roll Victor Patent Planing and Matching Machine.

The machine shown herewith is built from entirely new designs and patterns. The sides are made of heavy plates, with ribs extending inwardly, leaving the contour perfectly smooth. It is very heavy

works, arbors, etc., can be almost instantly dropped below the line of the bed when it is desired to do wide surfacing, and as quickly re-adjusted to the proper position for working flooring.

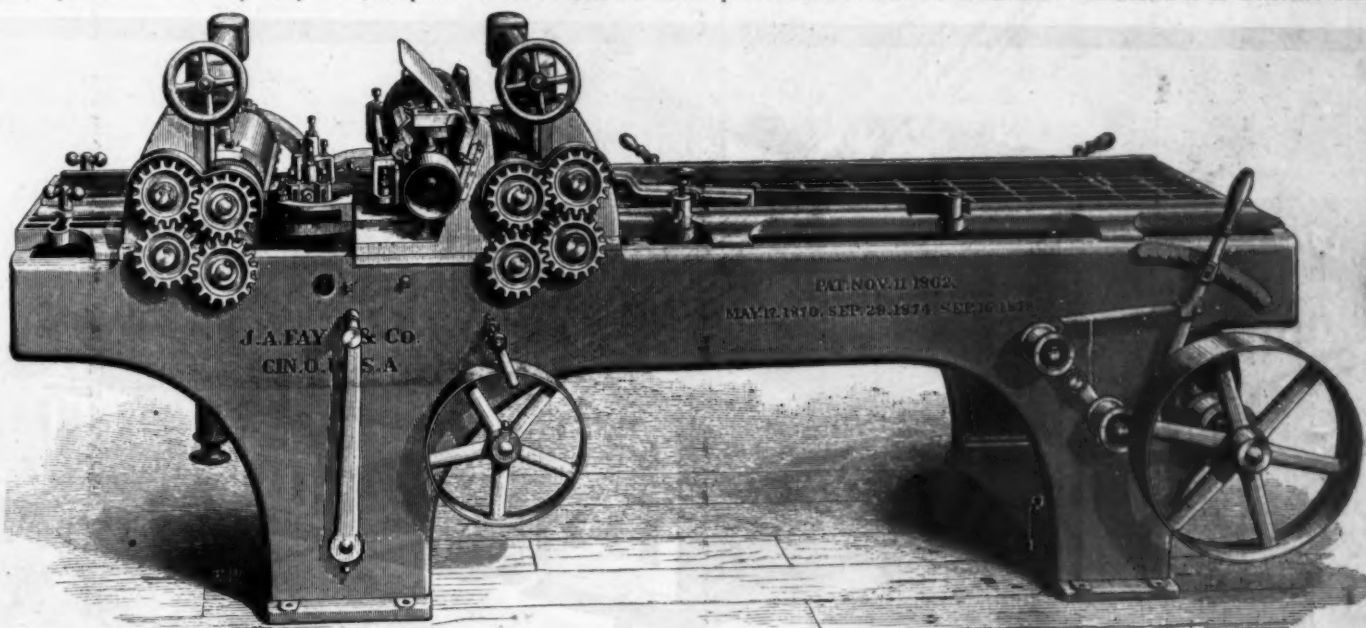
The manufacturers say, "for nice, smooth, accurate work, this machine has no equal for the price. It is a favorite wherever used, and persons whose business will not

are accurately fitted to them to insure smooth work. All the working parts may be easily and quickly adjusted, are not complicated, and consequently not liable to get out of order and cause trouble and delay.

The table is deep and firmly gibbed to the frame and is also secured by two bolts fitted with swivel wrenches. The top arbor is provided with an outside bearing, which

The machine is unusually wide, which allows plenty of space for belts, thus preventing their striking any part of the machine and being destroyed and causing annoyance, as is so often the case in moulding machines.

The arbors are all made of steel and carefully finished, boxes for the same being constructed so as to receive wear in the



NO. 2 FOUR-ROLL, VICTOR PATENT PLANING AND MATCHING MACHINE.

and substantial; the bearings are long, the journals large in diameter, the joints are all planed, the holes reamed, and the bolts turned. Its capacity has been enlarged to plane $\frac{1}{4}$ inch to 6 inches in thickness, 24 inches in width, and to tongue and groove up to 16 inches wide. For small planing mills and shops, where a first-class machine at moderate cost is desired, this machine will, it is said, meet every requirement.

The cylinder is made of solid forged steel; is mounted in heavy bearings which are planed to fit to stands, which are cast solid to a bed-plate extending across the machine. The cylinder head is slotted on all four faces, runs in long patent self-oiling bearings and is fitted for working knotty and cross-grained lumber. It has pulleys for two driving belts, and as it raises upon an angle, the tension of the belt always remains the same at any height it may be elevated. If desired, the manufacturers can furnish a cylinder slotted on all four faces at a small extra cost.

The bed under the cylinder has a detachable plate for truing up, or renewal, when worn out of line. The feeding rolls are of large diameter, and will receive stuff up to 6 inches in thickness; they are connected together by massive box housings, or stretchers, and driven by a train of heavy patent expansion gearing, fitted with a patent weighting attachment for insuring a uniform pressure on the lumber without regard to the variations in thickness caused by uneven sawing.

The hangers carrying the matcher arbors and heads are adjustable laterally across the bed, which distributes the friction of the lumber on the bed plate, and prevents the unevenness of wear. The matcher heads are made of gun metal, fitted with steel screws, and run on heavy steel arbors, the bearings of which are provided with means of self-lubrication.

The patent matcher clip, for working cross-grained and knotty lumber, is secured to the matcher hangers in such a manner as to allow of making a deep rabbet for drop siding. The pressure bars before and after the cylinder cut have quick adjustments for working moldings, rustic or drop siding.

It has a patent drop matcher attachment, by means of which the whole matching

justify the purchase of one of the larger and more expensive planers, will find this a most excellent machine." Messrs. J. A. Fay & Co., 267 to 285 Front street, corner John, Cincinnati, O., are the manufacturers.

Seven-Inch Four-side Moulder.

This cut represents a seven-inch four-side moulder of entirely new design and many valuable improvements, made by

extends to the floor and forms an additional support.

The heads are $4\frac{1}{4}$ inches diameter, four slots in each, while the side heads have a horizontal, vertical and angular adjustment.

The table may be lowered 12 inches by means of a crank on the front of the table in a very convenient place, as shown on the cut.

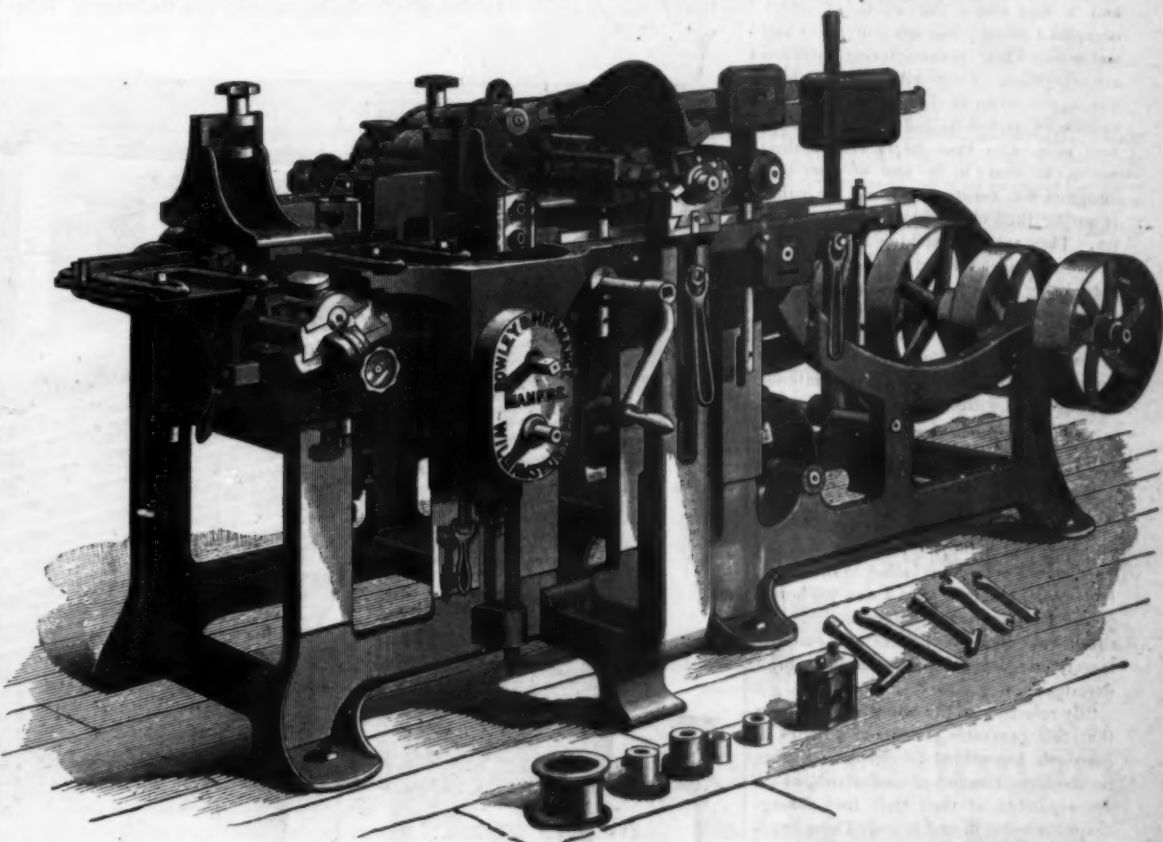
There are two top feed rolls $3\frac{1}{2}$ inches diameter and one under roll 5 inches diam-

bottom of the box and not in the sides.

The bonnet over the top head may be swung clear of the knives entirely, giving ample room to adjust knives, &c.

There is an unusually large amount of space about each head, which admits of setting the knives out without their coming in contact with anything, which, as every mill man knows, is very essential, but often overlooked, in the planning of these machines.

The tight and loose pulleys on counter are $10 \times 4\frac{1}{2}$ inches, and should run 900 revolutions per minute.



SEVEN-INCH FOUR-SIDE MOULDER.

Messrs. Rowley & Hermance, of Williamsport, Pa. The frame is cast in one piece and is so designed as to give it the greatest strength and solidity. The boxes are long, lined with best babbitt metal, and journals

eter, all being driven by an entirely new and complete system of gearing, which insures a strong, steady feed at all times, the bottom feed roll being driven equally well at any depth.

The machine has two speeds of feed, viz: 30 and 45 lineal feet per minute.

With each machine one set straight knives for each of the four heads is furnished, and one extra cap head and all the necessary wrenches.

A New Wood-working Machinery Plant.

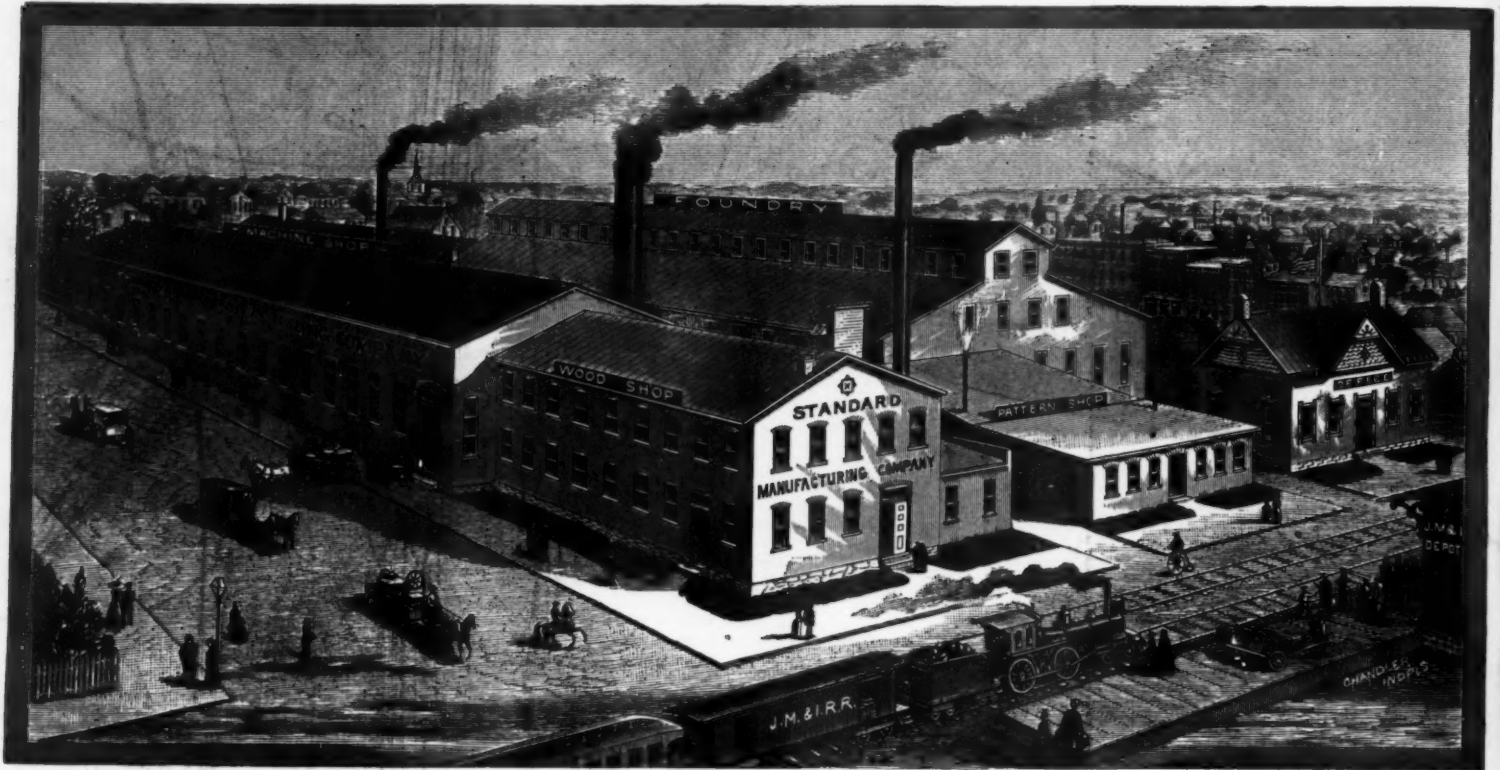
The accompanying cut illustrates the new works of the Standard Manufacturing Co., of Edinburg, Ind., who are engaged in manufacturing high-grade wood-working machinery. The concern is managed by Mr. E. J. Pennington, who has had a prac-

of four-inch tubes or nipples, expanded in the length and number of sections varying with the power of boiler required. The front of the generator contains one row of headers more than the rear end; both front and rear headers are connected to the under side of the water drums, and are connected to them with nipples expanded into the bottom of the drums. The top headers at

The drums are each made of steel having a tensile strength of 60,000 pounds per square inch. The tube plates, into which the tubes are expanded, have the holes accurately cut; are of extra thickness, and riveted to the drums. The heads are heavy and convex, and made of flange steel. Each drum is provided with a manhole, faced off, in its end. The mud drum, which

faces of the plates and headers are accurately milled so as to form a perfect joint; the plates are held in proper position by bolts, the heads of which are held in slots in the outer face of the plates, thus being protected from the water, steam and gases, providing against corrosion of the iron in the bolts.

It will be seen that the pressure of the



NEW WORKS OF THE STANDARD MANUFACTURING CO., EDINBURG, IND.

tical experience in this business for fifteen years. The Standard Manufacturing Co.'s plant is composed of drawing room, pattern and wood shop, foundry and machine shop, and a fine office, the whole of which occupies a ground floor space of about half an acre. Their manufacturing facilities are excellent. They will employ about 250 hands when in full operation. The opinion of architects and prominent business men, who have lately visited their works, is that it is one of the best designed and constructed works for manufacturing their class of goods in the country. They are now making a dozen different machines for cutting woods, among them being a new 7-foot band log saw mill, a new self-feed rip sawing machine for weatherboarding, and a new 40-inch band resawing machine. Buyers of wood-working machinery will find it to their interest to correspond with this company.

The Zell Improved Safety Boiler.

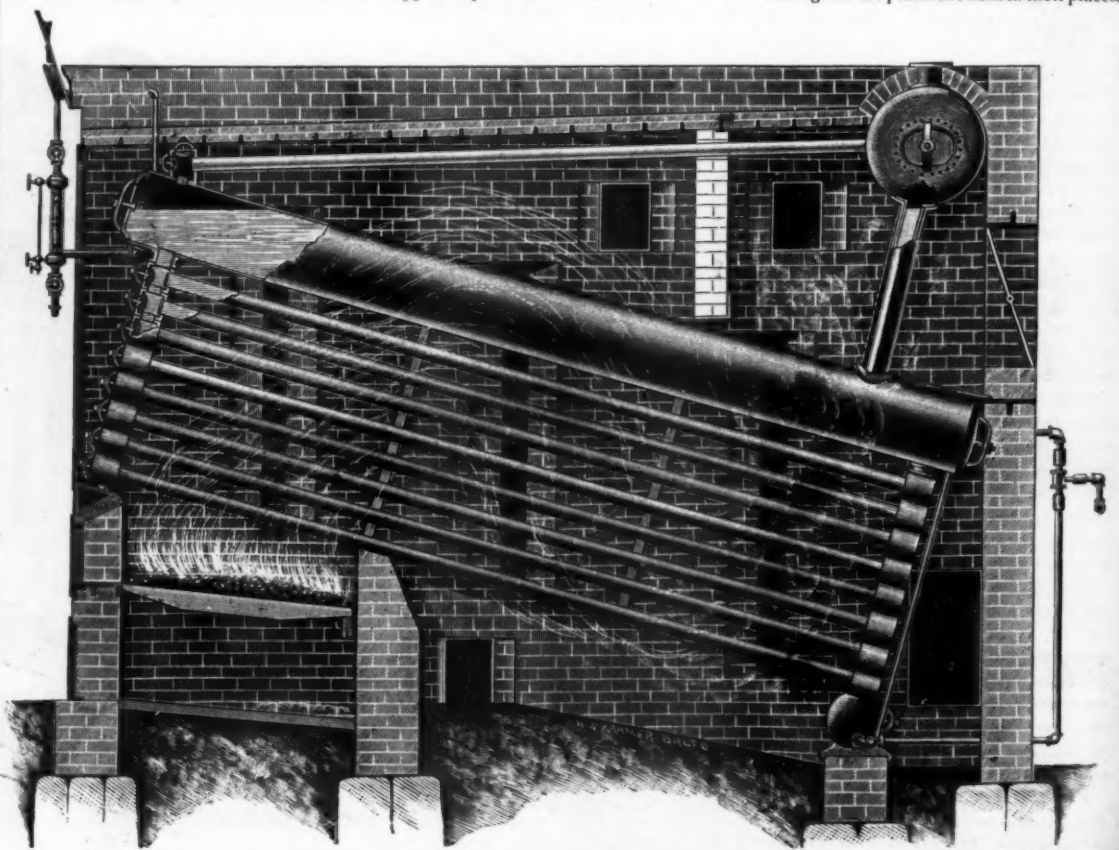
In the new Waterhouse electric-light station in Baltimore, our attention, says the Electrical Review, was called to the excellent results obtained from a new 500 horsepower Zell improved safety boiler. As these new style of boilers are entering largely into use we give herewith a brief description of it.

"By reference to the cut it will be seen that this generator consists of a series of four-inch lap-welded tubes, placed in an inclined position in sections of two, which are expanded at their ends into oblong-shaped headers or end boxes. These headers are made of special iron; are carefully proportioned in the distribution of metal to effect strength and durability; they withstand a hydrostatic pressure of 800 pounds per square inch. The sections are placed in vertical rows, bringing the tubes in a staggered position, and are connected together, top and bottom, with short pieces

the front end each contain two four-inch tubes extending horizontally back, and are expanded into the steam drum; this drum is connected to the water drums and rests on two iron upright pieces or saddles, which

is made of cast iron, the best metal to withstand corrosion, is placed below the bottom of rear headers, which is below the line of circulation, and is connected by nipples expanded into the headers. It has

steam holds the plates up to a joint without the aid of the bolts, which could be dispensed with when there is pressure in the boiler; the higher the pressure the closer and tighter the plates are held in their places.



THE ZELL IMPROVED SAFETY BOILER.

sustains the weight of the steam drum; they are connected together by expanded tubes. Thus the generator is put together without a single screw or bolted flange joint.

handholes on the rear side for inspection or cleaning.

The headers have handholes and plates opposite the tubes. These plates are placed on the inside of the headers; both the sur-

The rear end of the boilers rests upon two cast iron saddles placed under the mud drum; the front end rests upon a roller which is placed upon the top of the arch-box. This box is bolted firmly to the boiler

front and rests at its ends on brackets bolted to the side columns, and, being independent of the surrounding brick-work, the boiler is free to move with expansion and contraction without injury to the walls.

The arch over the furnace door is cast iron, through which there is a constant circulation of cold air. It is also covered by fire-brick lining, which protects it from the heat. It is claimed to be a great improvement over the ordinary fire-brick arches which are so generally used upon other boilers, and which have so often to be renewed, causing delay and expense. The fronts are all of new designs, and are made of wrought iron, with cast iron trimmings; they never crack, warp or twist out of shape.

We were shown also a 500 horse-power boiler of this type at The International Telegraph District & Construction Co.'s station giving very economical results. The United States Electric Light Co., Washington, D. C., have ordered a 400 horse-power boiler of this make. The Campbell & Zell Co., of Baltimore, have evidently entered the electric-light and power field with a boiler specially perfected for use in such stations.

New Cylinder-Driving Device.

What is said to be one of the most important recent improvements in wood-working machinery is a "new cylinder-driving device," so that the cylinder, instead of being driven in the old-fashioned way, by a belt being applied to a pulley on the cylinder, is driven by an extra shaft held in position by bearings in a perfect line with the spindle of the cutter-head, and connected to it by a flexible coupling, the result of which is said to be that all the strain, jarring and trembling necessarily associated with a belt running at such a velocity is entirely obviated.

This flexible coupling completely, it is said, and perfectly isolates or removes the effect of the action of the belt from the cutter-head itself, regardless of the great speed, thus keeping the bearings of the cylinder itself perfectly cool.

This device is the invention of Mr. Josiah Ross, of 1443 Niagara street, Buffalo, N. Y.,

to be not satisfactory, for the reason that they corrode and throw off particles, which the leather check valve partakes of, causing it to become hard and lose its pliability and packing qualities, and causing the pump to lose priming; while of rubber seats, it is said they do not have the endurance for deep well use.



THE MYERS GLASS VALVE SEAT.

The utility of glass for a valve seat cannot be questioned. It is non-corrosive and smooth, and it is extremely hard and does not throw off any corrosives; the leather operating on the glass retains its softness.

It will be apparent, the manufacturers say, that the mode of holding the glass seat is the best that could be invented. The valve cap is turned out perfectly true. The glass is underlaid with a rubber gasket. The leather check valve is placed on top of the glass, and the glass seat and check valve are held firmly in place by a brass follower, which can be drawn up absolutely tight, thus holding the check valve and glass seat in a reliable manner.

Another very important advantage is that the valve seat and check valve are entirely independent of anything else, and cannot be affected by the swinging of the suction pipe or become disarranged in taking the pump or cylinder apart.

This patented improvement is the exclusive property of F. E. Myers & Bro., Ashland, Ohio, and has been developed and perfected by them, and is now used in all the pumps and seamless drawn brass or porcelain-lined of all sizes manufactured by them.



NEW CYLINDER-DRIVING DEVICE.

who will use it on all the planing machines which he manufactures. He has very strong letters of commendation from those who are using this patent.

The Myers' Improved Patent Glass Valve Seat.

The accompanying cut is a very plain illustration of an improved method of placing the Myers' patent glass valve seat in pump cylinders.

The subject of making a valve-seat for pumps that would be thoroughly reliable has interested pump inventors and manufacturers for years. Metallic seats are said

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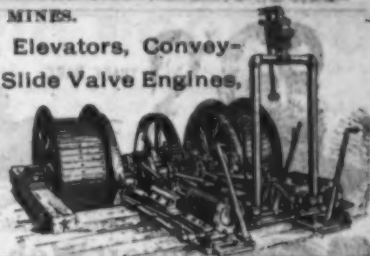
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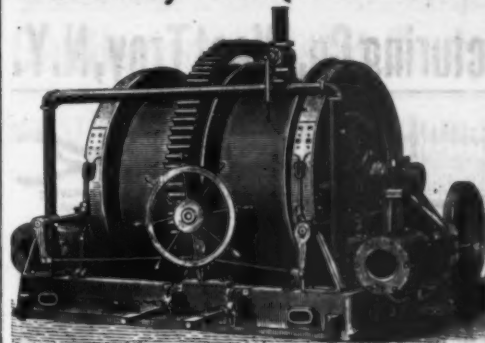
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Endless and Tail Rope Haulage Engines for

COAL MINES.

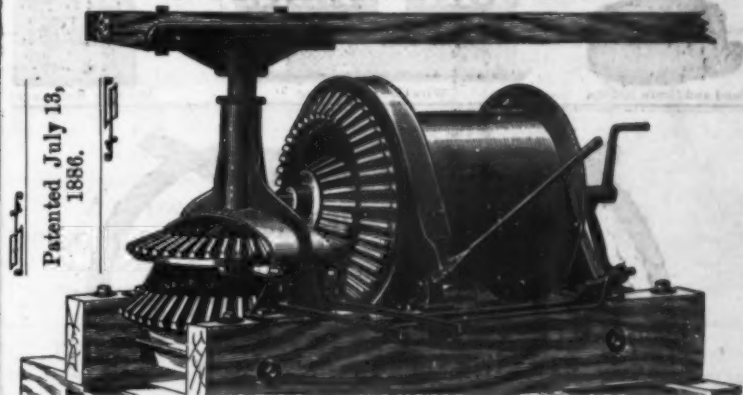
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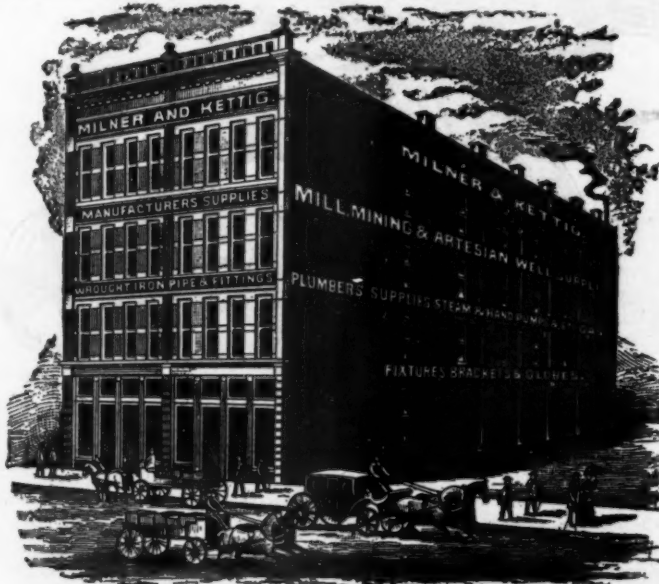
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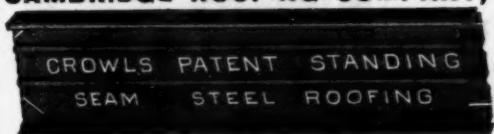
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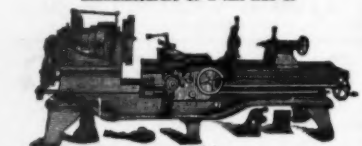
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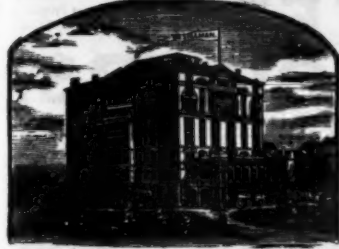
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FLORENCE, ALA., Sept. 14, 1889.

Editor Manufacturers' Record:

I regret that in the limited space of this letter I can only give a very brief outline of a few of the events which are at the present time combining to push Florence ahead so rapidly, and that it will be impossible to even touch upon others that are in process of crystallization. Were I at liberty to speak upon these latter subjects I would have material for more than one letter, but it has always been my policy to speak of what we have already here, and not of future plans, and I am free to confess that never have I been at a loss for subject matter. The action of the Farmers' Alliance Exchange in locating its factories at Florence has been a great thing for the city, and is evidence also of the fact that the Alliance is acting in this matter with excellent judgment. In a conversation this morning with Mr. Dolphyn, formerly of the Montgomery Mills, Montgomery, Ala., but at present manager of the Alliance Bagging Mills here, he stated that they would start weaving cotton bagging in the building purchased by them from the Florence Railroad & Improvement Co. in about ten days; that the looms have been shipped—are now on the road, and are expected every day. As soon as they are placed they will be operated to their full capacity. The coarse yarn used in the manufacture of the bagging will be furnished principally by the Cypress Mills, owned by the Florence Cotton & Iron Co. The Alliance Exchange is hurrying forward its large mill, 200x75 feet, and the paper, engine and boiler houses, so as to get in its machinery and be in full operation by January 1, 1890. This mill will turn out 20,000 yards of cotton bagging per day and will employ 175 hands. It will be equipped to spin its own cotton and also do the weaving. The Alliance Exchange is in excellent shape, its money coming in fast and plentifully; it pays cash for all it buys, and its determination to beat and overwhelm the Jute Trust and all other monopolies is fixed, firm and unalterable. I have just been shown a stencil of the design to be stamped on the cotton bagging made at their mills, representing a large wagon wheel, with the words "Alabama State Alliance, Florence, Ala.," on the rim, and on the hub the words "Anti-Trust." This wheel is stamped on the bagging with a view to unifying and solidifying all the State farmers' organizations, one of which is known as the "Wheel."

The McAlister Jeans Factory is running night and day, and the company has more orders than it can fill. As an illustration of the change of affairs I will cite the fact of a telegraphic enquiry received to-day from New Bedford, Mass., for 50 dozen pair of jeans pants. This is, indeed, a reversal of the old routine, and shows, as straws show which way the wind blows, that things have completely changed around. This is only one of many instances wherein the South has become the producer and the North the market for articles on which ten years ago the North had a practical monopoly.

A meeting of the stockholders of the Florence Shoe Manufacturing Co. will be held on the 17th for the purpose of increasing its capital stock from \$25,000 to \$75,000. This is due to the great increase in demand, which necessitates a larger plant. All the purchasing agencies of the Farmers' State Alliance are handling this company's goods. This is another illustration of the fact that while the large Eastern shoe factories are closing down, Southern manufacturers are enlarging their plants,

and by giving a good honest product of first-class material and workmanship are overwhelmed with more orders than they can fill.

The large hotel on the property of the Florence Railroad & Improvement Co. is being rushed to completion as fast as a full force of skilled workmen can push it. Its beautiful situation, overlooking the surrounding landscape, novel and striking style of architecture, lofty towers and turrets, make it more than an ornament to this rapidly growing section of our city. It will be called the Sweetwater Hotel, and it is designed, when finished, to place it in the hands of a first-class hotel man, who will run it without regard to expense and only looking towards the comfort of his guests.

The College Hotel on Poplar street is not far behind in progress towards completion. The contractors are working a force of fifty-three carpenters and hope to have it ready for occupation in forty days.

The hotel company has engaged Mr. Corzelius, of the Hotel Corzelius, as manager. Mr. Corzelius' long and successful career as a hotel man gives a sufficient guarantee that the College Hotel will be ably managed. These hotels are very necessary improvements here. Already our city is full of strange faces, and the capacity of our present hotels and boarding-houses is strained to accommodate the ever-increasing influx. Our real estate men are kept busy with enquiries for dwelling-houses, while there is not a store for rent, and the large number in progress of erection are let almost before the foundations are laid.

Col. W. A. Jeter, of the Jeter & Boardman Co., is here. His company will break ground to-morrow for the new water works, which he says will be the finest in the South. They are to be on the stand-pipe system, and the tower will be erected in Cedar Park upon the site of the present band stand. I have just seen the designs by W. A. Crossland & Son, architects, which contemplate a tower of masonry 54 feet diameter at the base and 40 at the top, 90 feet in height, with an iron tank or reservoir on top 40 feet in diameter and 30 in height, making a total elevation of 130 feet. It is designed to surmount this tower with powerful electric lights, which will serve as a beacon for the country for miles around.

If space permitted, I could go on indefinitely in the description of other new industries here, but will reserve them for another letter, warning you, however, that it will take a constant succession of long letters to give only briefly the changes and occurrences here, and to keep within hailing distance of the wonderful progress of this most wonderful evolution of a new life in an old land.

GOODWIN H. WILLIAMS.

IN THE MANUFACTURERS' RECORD, of Baltimore, the great Southern representative in journalism, Elizabeth City is in the line of progressive towns in the South. The Argus eyes of the MANUFACTURERS' RECORD are upon us and our pecuniary smiles and support should be upon the MANUFACTURERS' RECORD. In the last issue it announces that we are talking street cars in the town. May the talk be father to the act.—Elizabeth City (N. C.) Economist.

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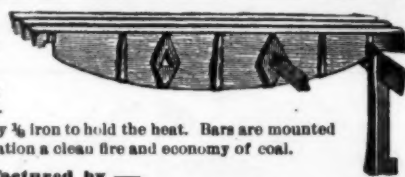
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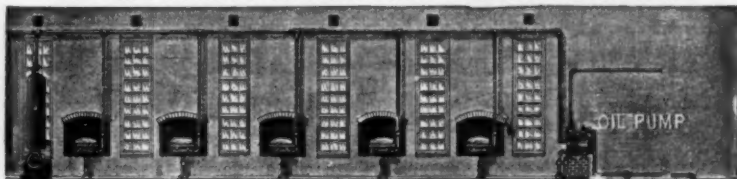
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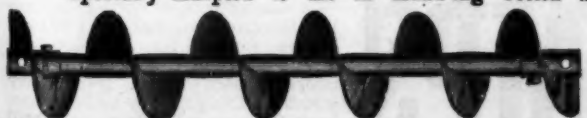
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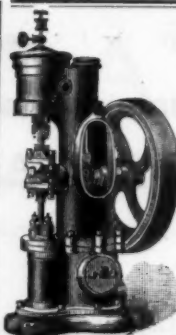


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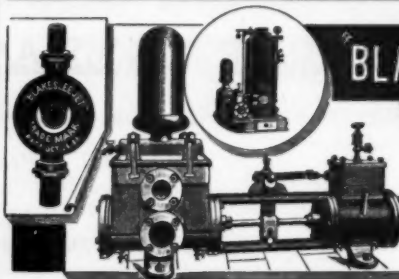
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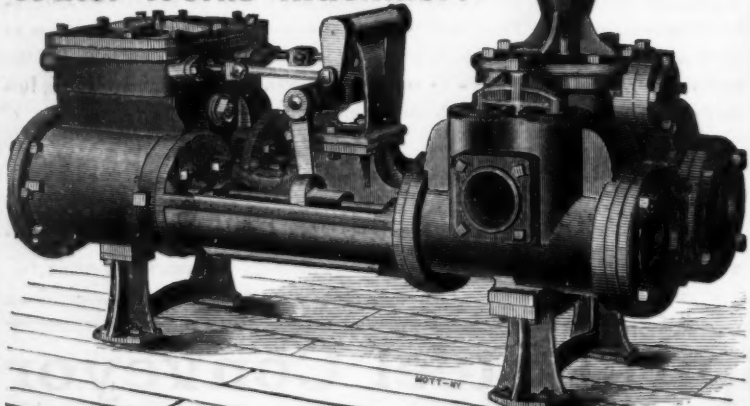
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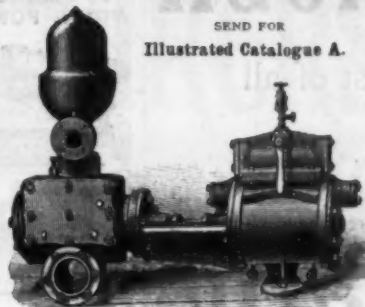


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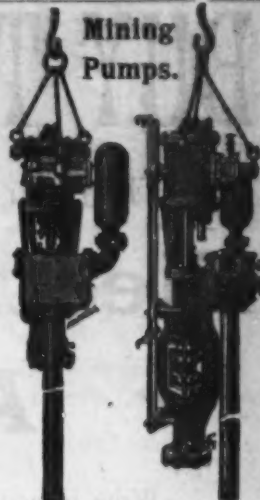


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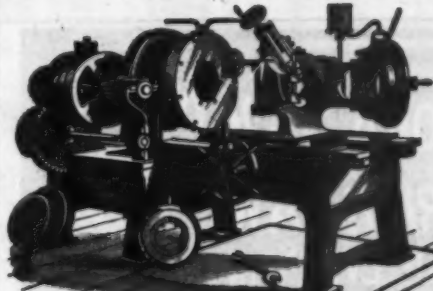
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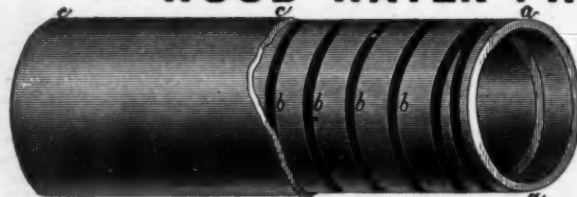
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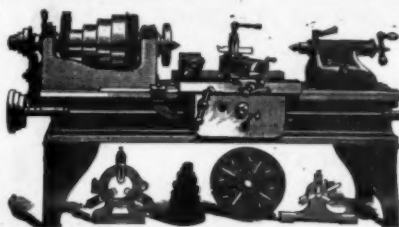
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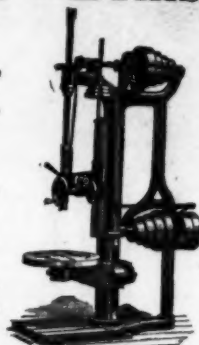
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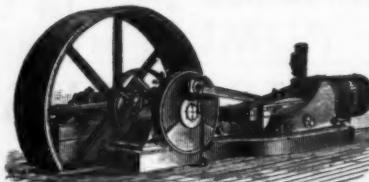
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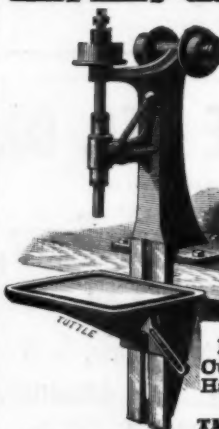
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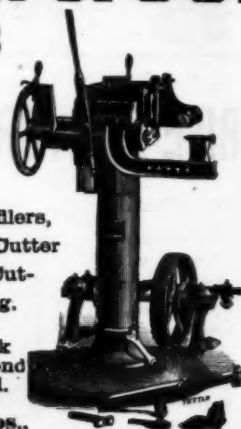


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